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Doctor (Medical Profession)-Patient (Public) Relations

The doctor-patient relationship is an important one, not only to individuals but also to the medical profession and to the public.

The doctor of medicine, in the interest of good relations, (1) must carefully survey the patient's needs, (2) must explain the care he will render, and (3) must fully explain the cost. In like manner, the medical profession, at local, state, and national levels, must adequately study the public's needs and attitudes at frequent intervals, must report what medicine is achieving, and must explain medical care and service costs.

This analogy was suggested in a talk by Albert V. Whitehall, director of health insurance of the Life Insurance Association of America, at a meeting of the Florida Society of Internal Medicine recently.

Just as the patient is continually judging his doctor, so is the community sizing up the medical group as a whole. The greater percentage of individual doctors who satisfy their patients, the more favorable will be over-all public relations attitude. In addition to seeing that their individual relations are in order, however, physicians need to work through various professional organizations in order to create good will collectively.

Each medical society should be alert to the health needs and to other problems that may confront the public. It should then face up to the problems by ascertaining the cause and should make plans to correct the deficiencies, some of which may lie with the physicians themselves. By

meeting its shortcomings squarely and fairly, the profession will be able to avoid friction and the resultant adverse public relations.

The medical profession has made great progress in research, in increasing the span of life, and in developing new techniques in diagnosis and treatment. These milestones of progress make a fascinating story of good medical care, and the public is interested in hearing all about it. Moreover, the provision of 24 hour emergency service which most county societies offer and the availability of grievance and mediation committees for potentially dissatisfied patients are facets of care which the public should know about and utilize.

It is appropriate and desirable not only to admit the increase in the cost of medical care within the past few years, but also to show clearly how most other services and commodities have advanced in price even more rapidly. The fact that hospital and drug costs are distinct from physicians' fees may not be clear. If the available prepayment insurance plans are used widely and without abuse, the cost of adequate health care can be kept within reason for the public at large.

In considering the various incentives that might lead one to enter the practice of medicine, it would seem that "service to one's fellow man" would top the list. Surely this incentive needs no apology. Yet, unless the patient and the public are cognizant of this incentive and have confidence in the individual physician and in the medical profession as a whole, the doctor-patient relationship can well deteriorate hopelessly. A good relationship is well worth seeking and maintaining.

—GLENN D. CARLSON, M.D., F.A.C.R., Dallas, Member, Council on Public Relations and Public Service, Texas Medical Association.

It's Poll Tax Paying Time

Survey Offers Key

The lead editorial suggests that the first step in good relations is a survey of the patient's needs. This recommendation has been adapted nationally in a personal interview survey to determine public opinion of individual physicians and of the medical profession.

Results show again that the majority rate physicians favorably. However, the person least likely to rank doctors more favorably than other occupation groups is the educated person with opinion-leadership characteristics. Apparently the medical profession needs special techniques for getting its story to this elite group.

Evidence from the survey also bolsters the principle that good deeds and good motives do not speak for themselves. They must be named and interpreted. Furthermore, when unfavorable impressions are negated successfully, the resulting vacuum must be filled with a positive impression.

The necessity to emphasize motives and objectives or service and deemphasize any interest in financial gain is clear from the survey.

As a new year gets under way, these facts may guide individual doctors. They also may suggest projects for county and state medical societies to institute or regenerate.

For example, certain key objectives of the American Medical Association's Communications Division might be effective in Texas:

1. A survey of indigent medical care, and if necessary, development of a program to meet needs thus revealed.

2. Adoption of policies guaranteeing the services of a physician to all.

3. Establishment of joint committees with hospitals to consider mutual interests and to help assure the best possible use of physicians' time in county medical society or hospital staff meetings.

Good service projects and appropriate recognition may be the key to a happy new year.

Rehabilitation—Function or Specialty?

Rehabilitate: To restore to a former capacity.
—New-Century Dictionary, New York, D. Appleton-Century Co., 1947.

With the establishing of orthopedic surgery as a branch of medicine, musculoskeletal rehabilitation became part of the regular and required training for qualification as a specialist. As a result, no branch of medicine can speak more authoritatively of rehabilitation, particularly when the musculoskeletal system is involved. Likewise the orthopedic surgeon is aware of the many ramifications of the unqualified word "rehabilitation." The orthopedic surgeon helped establish the specialty of physical medicine to assist in musculoskeletal rehabilitation, among other functions. With a tendency for a specialty of rehabilitation to form within the ranks of physical medicine there has been a growing concern among orthopedists, who feel that rehabilitation rightfully belongs to every practicing physician as a function of his profession and not as a specialty unto itself.

The chronological development of this specialty movement is probably as follows.

By the end of the Second World War the term rehabilitation had become a prominent part of our medical vocabulary, with rehabilitation centers as common military Medical Corps facilities both here and overseas. Of their many functions, two were predominant: (1) to fill the void between cessation of active medical care and return to duty, thereby relieving the military hospitals of the domiciliary care of recuperating soldiers; (2) through specific programs of body building, practically all involving the musculoskeletal system, to return soldiers to duty more rapidly in as nearly a normal state as possible. Surely these are proper considerations from the standpoint of soldier patients. At this time "musculoskeletal rehabilitation" became synonymous with "rehabilitation," and a "specialty" was born.

After the wars were over and the casualties rehabilitated the "specialists" were discharged. In an attempt to carry on their new found knowledge, they applied military tactics to civilian patients. To say the least, this must have been frustrating. Where the previous military patients were virile 18 to 30 year old males, physically in class 1A, except for their present disability, suffering in most instances a musculoskeletal system trauma, now the patients were of all ages, men, women, and children, with all forms of disabilities ranging from innumerable postsurgical cases (general, cardiac, thoracic, ophthalmological, and others) to the familiar musculoskeletal defect. To this were added medical dysfunctions from infancy to old age.

Faced with this plight a specialty of rehabilitation seems unwieldy and unreal. Four obvious reasons lend themselves to this conclusion.

1. With another specialist, another fee is charged. In these days of inflation, relief of the already financially burdened purse is as effective rehabilitation as the special techniques themselves.

2. It is extremely difficult for one individual to master all knowledge required to be a specialist in rehabilitation of all bodily systems and multitudinous phases of medicine.

3. Each patient can expect and is entitled to have his rehabilitation carried out under the direction of his own physician. It is reasonable to believe that more conscientious concern will be paid by his own physician to special details and idiosyncrasies.

4. The intangible pleasure and satisfaction a doctor derives from seeing his patient get well and restored to his former capacity by the skillful application of the art and science of medicine should not be denied. It costs the patient nothing but makes the doctor rich indeed.

Rehabilitation therefore is, and must remain, a proper function of the profession of medicine —not a specialty.

—DAVID M. CAMERON, M.D., F.A.C.S., El Paso.

President's Page

AXIOMS FOR SUCCESS

DR. YEAGER

As we embark on a new year I feel it would be well to review a few basic truths which govern the lives of the good and successful physicians. It is my hope that by keeping the thoughts listed below constantly in mind, we will all be able to live happier and fuller lives.

1. When one speaks well of a colleague to a patient, he reflects prestige on himself; derogatory remarks about a colleague establish a feeling of professional jealousy in the mind of the patient.

2. Be truthful with the patient. One will establish confidence and at the same time keep a relaxed mind. When a lie is told, every word must be remembered, and few are brilliant enough for this.

3. Should anyone be double-crossed, make sure that it is you. You will come out far ahead in the long run.

4. Fight for what you think is right even though it is unpopular. This is the mark of a man, and for it people will respect one.

5. Take time to do some constructive work for your profession. Otherwise one forfeits his right to complain.

6. Learn to shrug off unjust criticism. Remember, a sneering countenance is frequently the envious expression of an inferior mind.

7. Continuously thank God for the knowledge and ability He has given you in order that you might care for His most valuable and precious product, the human body.

F. W. Yeager, M.D.

ORIGINAL ARTICLES

Incidence and histology of cancer of the colon and rectum, early and leading signs and symptoms, diagnostic procedures, mode of spread, and limits of minimum radicability in regard to resection for cure are discussed. Of 1,870 patients with malignant lesions of anus, rectum, and colon, 1,786 were treated by radical resection with a mortality rate of 3.9 per cent.

HARRY E. BACON, M.D., F.A.C.S.

Philadelphia, Pennsylvania

Cancer of the Colon and Rectum

THE INCIDENCE of cancer of the colon and rectum according to vital statistics is on the increase. Since 1944, malignancy of the large bowel and rectum has exceeded cancer of the stomach as the most frequent cause of death from cancer. In 1947, there were 190,000 deaths in the United States from cancer and other malignant tumors. This represents more deaths in one year than occurred in the United States Army in action during World War II. Approximately 35,000 (18 per cent) of these deaths were due to cancer of the colon and rectum.

It is usually postulated that this increased incidence of cancer is due to several factors: (1) Increased life expectancy has placed more people in the optimum age group. (2) Better diagnostic procedures are being utilized more widely. (3) Finally, there is a greater awareness for the disease entity on the part of physicians and the laity and hitherto undetected lesions are now being discovered and recorded.

In spite of the relative increase in the incidence of cancer in this portion of the gastrointestinal tract, these are still appalling figures that confront every cancer symposium, with the stark question of what more can we do? First, we must be cognizant of the fact that considerable progress has been made by the cooperative efforts of all groups interested in alerting the laity to earlier detection and in the definitive treatment of this disease. Treatment is making an impress, as Wangensteen has pointed out; otherwise the tables of incidence and mortality would be strictly comparable.

The incidence of cancer of the rectum and anus is approximately 15 per 100,000 of population, while the death rate is 7 per 100,000 of population. The incidence of cancer of the colon and small intestine is variously reported from 25 to 30 per 100,000 of population, while the death rate is 15 per 100,000 of population. So, roughly, 50 per cent of those afflicted are being cured. But we know that approximately 75 per cent of those persons afflicted with this disease could be assured of 5 year cures if they received treatment earlier, that is, before the regional lymph nodes become involved. Unfortunately, cancer of the colon and rectum is often an insidious process where advanced lesions are encountered in some instances after only a short period of symptoms; or the lesion may be entirely silent. These are unfortunate situations that make all of us quake, and they probably will not be entirely averted until a specific diagnostic screening test can be applied to the whole populace. However, many of these lesions, as well as early premalignant and malignant growths, are now being discovered by the numerous cancer detection centers and by conscientious private physicians.

It is my feeling that the hope of achieving greater curability with this increasingly prevalent neo-

plasm rests, at the moment, chiefly upon the successful execution of a two phased program: (1) Early detection must continue to be emphasized and reemphasized to both physicians and the laity. (2) Standards of minimal radicability in the treatment of cancer of the colon and rectum must be established for those treating this disease.

INCIDENCE

Dukes has called attention to the unequal sex distribution of cancer of the colon. In the proximal colon, cancer is found more frequently in the female, whereas in the distal colon it occurs with greater frequency in the male, according to his studies. Coller reported the sex distribution of cancer of the colon to be equal in male and female. Bacon, in reviewing 1,995 cases of cancer of the rectum and sigmoid colon, reported three-fourths as many females with lesions in these segments as males.

MULTIPLE MALIGNANCY

Numerous articles in the literature during the past 20 years have emphasized the increasing incidence of multiple primary malignancies in all portions of the body. Slaughter has shown in an analysis of 1,868 cases that there is a striking tendency for them to occur in the same or paired organs. Multiple primary neoplasms occur most frequently in the skin or in combination with the skin. The next most commonly involved system is the gastrointestinal tract. Here the colon leads the other segments with the highest incidence of multiple primary lesions. Multiple primary neoplasms were ascertained in 162 of 1,670 patients in one series in the Department of Proctology at Temple University.

It has been recognized for some time that adenomatous polyps of the colon and rectum occur more frequently in cases with carcinoma of these segments of bowel than in those individuals who do not have malignancy. Mayo and Schlieke reported that adenomas were present in 114 of 334 patients (34.1 per cent) with carcinoma of the colon or rectum who subsequently came to autopsy. Definite malignant changes were present in 16 cases, or 11.4 per cent. For comparison, they reported the incidence of adenomas of the colon and rectum to be 16 per cent in 100 consecutive routine autopsies where the cause of death was other than carcinoma of the large bowel. Bacon and Broad reported adenomas to be present in the colon and rectum of 31.2 per cent of 171 consecutive operative cases for carcinoma of these segments. Twenty per cent were found to be malignant. So it behooves all physicians concerned with the diagnosis and treatment of malignant lesions of the colon and rectum to suspect and carefully rule out the presence of other primary malignant or premalignant neoplasms, and most particularly in the supposedly uninvolved segments of the colon.

SYMPTOMS AND DIAGNOSIS

Textbooks for years have distinguished, symptomatically, lesions of the left colon from those of the right by the tendency of the former to become obstructive. The liquid nature of the stool and the relatively larger lumen delay obstructive symptoms in the right colon. Anemia is cited by many authors as a frequent early and leading sign in cancer of the cecum. However, a review of the autopsy material at the University of Minnesota by Sherman indicated that this sign is no more frequent in this segment of the colon than in other locations. Right lower quadrant pain and cachexia were recorded as the first and leading symptoms in 40 per cent of the patients with carcinoma of the cecum. C. W. Mayo stated that 15 per cent of the patients with carcinoma of the right colon have had appendectomies after the onset of the symptoms referable to the malignant process.

Changes of bowel habits with abdominal discomfort are among the earliest symptoms of lesions of the transverse and descending colon. Here anemia, weight loss, and obstructive symptoms are usually observed in the later stages of the disease. Bleeding with stools was noted as an early sign in 10 per cent of the transverse colon lesions and in 20 per cent of those located in the descending colon in the autopsy material at the University of Minnesota. Both Swinton and Coller reported that 98 per cent of the patients in their series had positive histories of one or more of the cardinal findings with large bowel cancer, namely, (1) blood in the stool, (2) alteration of bowel habits, and (3) pain of an obstructive character.

With lesions of the sigmoid colon and rectum, bleeding is the most constant and one of the first signs of malignancy. In our group of cases, the passage of blood was cited in 85.6 per cent. By "change of bowel habits" is meant an alteration of, or deviation from normal. It is a symptom complex to be highly respected and one that warrants thorough investigation. Patients frequently complain of constipation and recall the increasing need for laxatives. Constipation was noted by 53.7 per cent of our patients, and diarrhea by 31.7 per cent. The "fake

urge" to empty the bowel with the expulsion of flatus occurring several times daily is significant and was noted by 37.8 per cent. Incompleteness of evacuation—the sensation that the movement is unsatisfactory—was mentioned by 41.9 per cent of our patients. The necessity to arise before the accustomed hour because of a desire for stool—"early morning diarrhea"—was complained of by 16.9 per cent.

Abdominal pain of an obstructive nature is a frequent early and leading symptom of carcinoma of the sigmoid, while with lesions involving the rectum it occurs late in the disease, and then usually only where a large fungating lesion blocks the lumen. Localized pain in the region of the anus and tenesmus are usually early symptoms of lesions involving the anal canal. Discharge, bleeding, and obstruction occur with advanced lesions in this location.

The discharges associated with malignancy of the lower bowel are usually described as blood, pus, and mucus. Particles of fecal material, pus from degeneration of the growth, blood from ulceration, and mucus as a result of the irritant are present. The condition may be altered materially by catharsis. The discharges possess a peculiar fetid odor, due to decomposing blood and malignant degeneration. Loss of weight is usually a late symptom; it is frequent in the presence of metastases and where episodes of chronic obstruction and loss of protein, electrolytes, and fluids have occurred. Cachexia, anemia, and loss of strength are constant late symptoms.

Patients presenting any of the afore mentioned signs and symptoms certainly deserve a thorough work-up to rule out large bowel malignancy. This work-up should be initiated, of course, by a thorough digital examination. In fact, this maneuver must be included as a requisite to every physical examination. When it is recalled that 50 per cent of all rectal and colon lesions could be palpated by the examining finger, the truth of the old clinical adage, "If you don't put your finger in, you'll put your foot into it," is again emphasized. A rectovaginal examination should be done as well in every married female.

Proctoscopic visualization of the anal outlet and low rectum should precede sigmoidoscopic examination. It is true that bleeding per rectum is frequently due to internal hemorrhoids and other anorectal lesions, but this should never be asserted until all proximal pathologic conditions are carefully ruled out. In performing a diagnostic sigmoidoscopic examination, one never should be content with visualizing less than the distal 25 to 30 cm. of the bowel, because this is usually possible with proper preparation and in experienced hands. Since 75 to 80 per cent of all malignant lesions of the colon and rectum could be visualized by a 25 cm. sigmoidoscopic examination, why shouldn't this maneuver, too, be a part of every routine physical examination in the asymptomatic group past 40 years of age?

Colonic lesions must be verified by barium enema studies. Since double contrast studies are now universally performed, I believe that this is certainly the procedure of choice to give the examiner the best visualization. Many hitherto undetected small adenomas, as well as early malignancies, can now be demonstrated by this technique. Yet it must be remembered that even this method of diagnosis has some shortcomings, particularly with reference to the blind areas of the sigmoid and the flexures. However, I think that double contrast barium enemas are accurate in diagnosing 95 per cent of the colon carcinomas.

MODE OF SPREAD AND RESECTION

We all recognize that sufficiently radical resections for malignant lesions of the colon and rectum depend to a large extent upon the surgeon's accurate knowledge of the mode of spread of this neoplasm. These facts must be frequently reemphasized, and we must be cognizant of any new information influencing the standards of minimum radicability.

The spread of carcinoma of the colon and rectum is a threefold process:

1. By direct infiltration the tumor cells tend to spread in the submucous coat and encircle the bowel, and in time to penetrate the muscular and serous coats, to infiltrate other organs, and to form implants. Where adjacent organs and tissues are involved, whether it be peritoneum, omentum, stomach, spleen, uterus, bladder, or other structures, they certainly should be included in the resection of the primary tumor, if it is deemed resectable.

2. By the invasion of blood vessels tumor emboli spread to distant organs, most frequently the liver and lungs. The incidence of blood vessel invasion at the site of the lesion has been reported variously to be from 10 to 30 per cent. Coller reported blood vessel involvement by carcinoma in 15 per cent of the postoperative malignant lesions of the colon and rectum in his series. Bacon and Rowe noted involvement in 12.9 per cent of their cases. The prognosis as to cure is indeed poor where this occurs, yet in many instances the involvement is still localized and a radical resection will eradicate the involved vessels. I believe that certainly solitary metastatic nodules in the liver should be resected where possible. Several authors advocate more radical elimination of liver involvement by partial to subtotal hepatectomy. Solitary metastatic pulmonary nodules have been resected in a few instances with apparent success.

3. By lymphatic metastasis the regional lymph

nodes draining a given segment of colon become involved with tumor and must be resected widely for expected cures. Delamere, Poirier, and Cuneo, and Jamieson and Dobson were the first to investigate thoroughly the lymphatic drainage of the large intestine. Since then the outstanding investigations of Gilchrist and David and Coller and his associates have added further to our knowledge.

The lymphatic drainage of the colon is conducted via three systems: the intramural, the intermediary, and the extramural lymphatic networks. The intramural system consists of the submucosal, intermuscular, and subserosal networks. Where the large intestine is devoid of a continuous longitudinal muscle layer, the intermuscular and the subserosal networks are the same. The lymph channels begin about the mucosal glands of Lieberkühn and drain to the submucosal network. This network communicates freely with similar channels above and below the site of the lesion, but lymph tends to flow toward the deeper intermuscular and subserosal networks.

Since lymph channels follow the course of the radial blood vessels around the circumference of the bowel, carcinomas of the large intestine as well as the rectum tend to be annular. The lymph then flows from the intramuscular system through the intermediary lymph channels to the extramural lymphatic system. This consists of a group of nodes and lymph channels anatomically arranged about the blood vessels and are described by Jamieson and Dobson as corresponding to these vessels. Thus, there is the ileocolic chain, the right colic chain, the middle colic chain, the left colic chain, and the inferior mesenteric chain. Along each chain there are aggregations of nodes that are designated as the epicolic, paracolic, intermediate, and the main group of nodes.

The epicolic nodes lie in contact with the surface of the bowel, usually near the mesenteric border, either on the serous or retroperitoneal aspects of the colon. The paracolic nodes lie in the mesocolon adjacent to the colon along the short terminal vessels leading from the arcades. The intermediate nodes are situated about midway between the arcades and the origins of the principal branches of the mesenteric vessels. The central nodes are those situated at the points of origin of the superior and inferior mesenteric arteries, where they form part of the periaortic group of nodes. The greatest lymphatic supply and the most elaborate chains of nodes are associated with the cecum and sigmoid, while the ascending and descending colon are relatively poorly supplied.

The ileocolic route of spread drains the terminal ileum, cecum, appendix, and the greater part of the ascending colon. Lesions of the cecum may involve nodes at the hepatic flexure, so they should be properly resected by performing a right colectomy up to the midcolic artery and with excision of a generous portion (25 to 30 cm.) of terminal ileum to include the node bearing area at the ileocolic angle. Lesions of the ascending colon and the hepatic flexure may involve the ileocolic nodes as well as the right colic and midcolic nodes. These lesions should be similarly resected but the distal line of transection should be distal to the midcolic artery to include that possible area of lymphatic spread.

The right colic chain drains the area supplied by the right colic artery. These nodes are not constant. They may drain downward into the ileocolic chain, may go medially toward the superior mesenteric nodes, or may drain upward into the middle colic chain.

Similarly, the middle colic chain drains the area of the middle flexure and the proximal two-thirds of the transverse colon. Since the direction of the middle colic artery is to the right, toward the head of the pancreas, in the base of the mesocolon the spread

Dr. Harry E. Bacon, professor and head of the Department of Rectal Surgery, Temple University School of Medicine, delivered this address at a general meeting of the Texas Medical Association in annual session April 20, 1959, in San Antonio.

of metastases is downward and toward the right. Furthermore, there is communication between the lymphatics of the transverse colon and those of the stomach and the greater omentum.

So lesions of the proximal two-thirds of the transverse colon should be properly extirpated by a wide segmental resection with the accompanying mesentery down to the superior mesenteric artery, to include the lesser omentum close to the stomach and the greater omentum. In some instances, the stomach should be resected if it is involved by invasion.

The left colic chain drains the area of distribution of the left colic artery. Neoplasms of the distal one-half of the transverse colon would tend to drain toward the left, whereas neoplasms of the upper descending colon might drain either upward toward the splenic flexure or downward toward the sigmoidal vessels. Lesions of the splenic flexure may spread through lymphatics of the omentum and eventually drain to the splenic nodes. These lesions should be extirpated by performing a left colectomy with the proximal line of transection at the midcolic artery and the distal line just proximal to the sigmoidal

vessels. The mesentery should be similarly resected widely to the origin of the left colic artery at the inferior mesenteric artery. In resecting splenic flexure lesions, the greater omentum should be included and the spleen, as well, in advanced lesions.

Lesions involving the distal descending colon and proximal sigmoid colon should be resected by a left colectomy. However, neoplasms of the midsigmoid can be extirpated adequately by a wide segmental resection with the proximal line of transection just distal to the descending ramus of the left colic artery and the distal line of transection down to the ampulla of the rectum to include the superior hemorrhoidal artery and the intervening mesentery up to the juncture of the left colic arteries. Our studies on cadavers have revealed this anastomosing marginal vessel to be so small in 10 per cent of the bodies studied that it probably would be inadequate to carry sufficient blood supply to the distal left colon. However, complete absence of this anastomosis was not observed in any of the 90 bodies studied in our series. Several authors have reported the absence of this anastomosing marginal vessel in 5 to 10 per cent of their cases.

It is not within the scope of this paper to describe in detail the lymphatic drainage of the rectum and anus. This has been discussed elsewhere, but a few salient facts must be mentioned to elucidate our choice of operative procedures for lesions at various levels. According to Miles and subsequent investigators, the lymphatic systems of the rectum and anal canal follow the courses of the superior, middle, and inferior hemorrhoidal veins. The direction of the lymphatic metastases depends upon the direction of the lymph flow at the site of the lesion. If the usual lymphatic channels become obstructed by neoplastic emboli, the lymph will find unobstructed channels. Not until there have been extensive metastases along the superior zone of spread do all the major lymph channels become sufficiently obstructed to cause retrograde flow. It is the consensus that retrograde metastasis seldom occurs more than 6 cm. distal to a lesion.

The chief route of lymphatic metastasis for lesions of the rectum and anal canal is via the superior chain of lymphatics that largely accompany the superior hemorrhoidal vessels, but may extend throughout the distal mesosigmoid. Neoplasms involving the distal 3 cm. of the rectum also may metastasize laterally via the lymphatics that accompany the middle hemorrhoidal vessels in the lateral ligaments and subsequently involve the hypogastric and iliac chains of lymphatics. Coller and his associates found involvement of the lateral areas of spread in 54 per cent of their cases with lesions in the distal 3 cm. of the rectum, and they found no involvement with lesions above this area. Recently, it has been pointed out that the lateral zone of lymphatic drainage of the rectum accompanies the middle hemorrhoidal vessels in the lateral ligaments well above the levator ani muscles. Wood and Wilkie, and Dukes have emphasized that lateral lymphatic metastasis does not occur in the levators, but that they might be involved by direct extension.

Malignancies of the anal canal may metastasize via the inferior chain of lymphatics to involve both the superficial and the deep inguinal lymphatic vessels and nodes and simultaneously may involve the lateral and superior zones of spread. Malignant lesions of the anal canal should be resected properly by performing a radical Miles type of resection. The mesosigmoid should be resected up to at least the first sigmoidal artery and a complementary pelvic lymphadenectomy done with extirpation of the preaortic and the iliac lymphatics from the inferior mesenteric artery down to the origin of the middle hemorrhoidal vessels. Bilateral inguinal node dissections should be performed as soon as the patient can tolerate an additional procedure.

Malignant lesions of the distal 3 to 4 cm. of the rectum should be treated similarly, except for the inguinal node dissections. It is granted that a complementary pelvic lymphadenectomy does add to the operating time of an already major surgical procedure, but if more radical lymph node dissections will decrease the incidence of local recurrence, then we must add this procedure to our armamentarium. We have performed this combined procedure in 462 patients to date; 17.3 per cent showed positive inferior mesenteric nodes. We prefer to resect carcinomas of the proximal rectum (3 cm. above the anorectal line) and the distal sigmoid by proctosigmoidectomy ("pull-through"). It is possible with this procedure to resect the mesosigmoid widely up to the origin of the left colic artery and higher. The pelvic dissection includes the wide removal of the middle and lateral sacral lymph nodes, the endopelvic fascia, and wide transection of the middle hemorrhoidal vessels. In the perineal phase the anal sphincter muscle bundles and their innervation are preserved, but the levator muscles are transected widely.

Of our series of 1,870 patients with malignant lesions of the anus, rectum, and colon, 1,786 were treated by some form of radical resection—a resectability rate of 91.7 per cent (table 1). This was calculated on the basis of those patients admitted to the operating room. Of the 1,786 patients treated by resection, there was a mortality rate of 3.5 per cent.

TABLE 1.—*Malignancy of Anal Canal, Rectum, and Colon (September, 1940-March, 1959).*

Number of cases	1,870
Number of radical resections	1,786
Resectability rate	91.7%
Mortality from resections	3.9%

SUMMARY

The incidence of cancer of the colon and rectum now exceeds cancer of the stomach as the most frequent cause of death from cancer. Vital statistics indicate that approximately 50 per cent of these patients are now salvaged. Another 25 per cent could be cured if their lesions were resected earlier, that is, before the regional lymph nodes become involved with cancer.

The incidence and histology are reviewed. Multiple malignancies are more common in the colon and rectum than in the remainder of the gastrointestinal tract. Adenomas were recorded in conjunction with primary carcinomas in 31.2 per cent of 171 operative cases. Twenty per cent were found to be malignant.

Early and leading signs and symptoms accompanying lesions in the various segments of the large bowel are reviewed. Diagnostic procedures are emphasized, where any of these signs and symptoms are manifest.

The mode of spread of cancer of the colon and rectum is reviewed in the various segments, and the limits of minimum radicability in regard to resection for cure are discussed.

Of 1,870 patients in our series with malignant lesions of the anus, rectum, and colon, 1,786 were treated by some form of radical resection. The mortality rate to date has been 3.9 per cent.

♦ Dr. Bacon, Department of Rectal Surgery, Temple University Medical Center, Philadelphia.

Reminder!

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Texas Medical Association Annual Session

April 9-12, Fort Worth

Read Organization Section Regularly for Details

Complete Program in March Issue

Public Relations Through Practice Management

Good merchandising can benefit the individual physician and the medical profession. The physician must set the example for effective attitudes by his employees toward his patients, and himself deliver understanding and consideration as well as good medical care.

NELSON J. YOUNG

Detroit, Michigan

PUBLIC RELATIONS is vital to the success of the medical profession—and to your own practice. But before getting into details, let's get together on a basic definition. You represent the medical profession. Now what *is* a profession? The dictionary says, "A profession is a vocation requiring learning and mental labor—classically medicine, law, clergy."

Back in 1920 the physician was obviously of the educated elite—only 48,000 men and women graduated from college. The physician was an authority whose word generally was not disputed and whose ministrations were accepted without question. This was to a considerable degree because of the comparative lack of schooling on the part of his patients.

That educational environment has vastly changed. There are now tens of thousands of people holding advanced degrees—in engineering, sciences, business. They too meet the definition of professional people.

Today the physician is no longer so unusual because of outstanding knowledge or schooling. By next year there will be more than 8,000,000 college graduates. Today's patients have studied physiology in school; they have read many articles on health; they are not ignorant of medical affairs.

The public is tremendously interested in health. There is a great volume of pseudoscientific writing in daily, weekly, and monthly publications, as well as a home medical adviser, which for $10 gives diagnosis and treatment.

What does all this mean? It means that the pedestal on which the medical profession stands seems much lower today. Not because you have sunk in the public's eyes. No! Because the rise in public education has reduced the gap in general knowledge.

Let us capitalize on that increased knowledge of patients, and gain better results by more effective cooperation than was possible from unschooled people. Neither your standing nor that of the profession is threatened by broader public knowledge as long as you individually keep up with the progress in medical science.

Why should we go into all this generalized theory? Because you doctors set the example for the attitude of your nurses and receptionists. A physician may speak of patients as "dumb" or "stupid" (meaning they are misinformed). The nurse or receptionist taking her cue from her employer then feels justified in dealing with patients with lack of respect.

You control the attitude of your employees toward your patients—and that represents public relations.

Merchandising

After sketching the environment which is essential for its success, we have now finally come to the topic of this talk—"Public Relations Through Practice Management."

Last August at a meeting on the subject of public relations at the American Medical Association, the head of Opinion Research Corporation recommended that the medical profession follow the precepts of merchandising. This is worth serious thought. You supply a service—medical care—for which you usually make a charge, and are usually paid. Your motive is to help your patients, but you follow many of the forms of merchandising. Let's see how without compromising your professional integrity or ethics you can utilize the principles of successful merchandising.

What do smart merchandisers do?

Well, they advertise.

You can't advertise, can you? Well, not directly—but—it is done in magazines and newspapers, on TV and radio for you.

One night recently I went through current magazines in our home: *Readers' Digest, Time, Coronet, Redbook, Cosmopolitan, Ladies' Home Journal, Mc-*

Call's, Good Housekeeping, Better Homes and Gardens. Every single one has a section or an article on health.

You're getting a lot of publicity.

Here's an example: *Good Housekeeping*—"If You Think Your Doctor Has Overcharged You." Here's another: *Coronet*—"Does Your Doctor Practice Second-Class Medicine?"

There's a lot of discussion about the bad press of medicine. How many of you think doctors or the profession are being unfairly treated or getting bad publicity in current magazines?

Now, consider *Readers' Digest*—full page ad of Metropolitan Life Insurance Company, final paragraph—"discuss with your Doctor." There's one unusual feature about this ad—it winds up telling people to see their doctor—but Metropolitan Life picked up the bill for $34,000 that month, and has done so for many months in succession. *Redbook* has the same full page ad—costing $12,000.

That article in *Good Housekeeping* really wasn't bad at all—it started right off saying, "Talk the bill over with your doctor if you think it's excessive." The article in *Coronet* has a favorable discussion of the Academy of General Practice.

In September the first program of a television series sponsored by Michigan Blue Cross-Blue Shield was shown. This program showed the birth of a baby by cesarean section. The film clearly showed the dexterity of the surgical team, and the various procedures were explained in terms a layman could understand. Public interest was widespread. Eighty per cent of the sets turned on were tuned to this program on basis of telephone survey. Of the 1,250,000, 95.7 per cent were favorable in their response.

Last year in Detroit TV showed an aorta transplant in a man of advanced years. It also showed removal of a cataract. The programs were excellent—they were wonderful.

Representing the "Best Doctor"

All of you who have read the book "The Hidden Persuaders" recognize that an excellent job is being done at little or no direct cost to physicians to precondition the American public to patronize the medical profession, to see their doctor.

It's still true that you can't come out in print and say, "Joe Blow is the best doctor in town."

You can't do it that way, but here's what you *can* do—you can make people want to come to your office by making them feel that for them you *are* the best doctor in town.

You and your wives make some sort of impression in every phase of community life. You can show the attributes of integrity, dependability, and interest in your community, P-TA, church, Boy Scouts, even the country club. Those attitudes lead people to turn to you in times of worry over health—to come to your office for treatment.

There is marked contrast between the sales approach in merchandising and the approach of many physicians.

Not long ago in Miami a physician left word at my hotel that he wanted to see me. His receptionist told me over the telephone that he was terribly busy and wouldn't be able to give an appointment. I then emphasized that *he* wished to see *me* and asked if he would be free at lunch time the following day. Then she said this very busy doctor had already left for the day at 4:45. I phoned his home and explained my purpose. The doctor's wife emphasized that her husband was a busy man and that "he would see me at *his* convenience, and not at *mine*"—those were her words. Even my explanation that I had already cleared with his office brought repetition that the doctor's time was very valuable.

You can bet that if I were a patient I would have been boiling mad—as it was, I understood why that doctor's practice has not grown in 3 years.

This case is an example of miserable public relations—(1) alienating patients, (2) injuring the medical profession, and (3) costing the doctor money.

Here is the ironic point—the doctor was horrified to hear of this incident. He's a fine man, but he had never taken the trouble to learn how his office girl and his wife represented him on the phone.

There's the key to most bad patient relations—poor communications between doctor and patient—inadequate exchange of information through employees.

Who usually makes that first impression on a potential patient? Your girl when she answers a phone call for an appointment, or greets the patient in your reception room. Your office girl is clean and tidy, she is intelligent, and she likes people. If that *doesn't* describe the girl in your office, you'd better do something about it!

Train your girl. Some doctors have told me their girl doesn't handle people right, she offends patients—and then those same doctors will admit they never have told the girl how they want her to do her job. Your girls are your public relations representatives, and it is up to *you* to see they do a good job.

Patients are usually under emotional strain when they call for an appointment or come to the office. Your girl should give them assurance they'll be taken care of just as soon as possible. Have her find out the trouble, if the pain is acute, what is the patient's

temperature, how long has this trouble been going on—that's information you'll need.

If it's an emergency, Mrs. Smith will be worked in even though the doctor's appointments are full. She will have to wait a bit—but she'll be taken care of.

If it's not an emergency, your girl is to offer the first open appointment instead of saying, "No, the doctor can't see you today." She is to *offer service* instead of refusing to give it. The key to good public relations is that offer of care or attention.

After a time is agreed on, your girl will not just hang up without signing off. She'll say something like, "The Doctor will look forward to seeing you Thursday at 3, Mrs. Smith."

Mrs. Smith will hang up the phone much relieved, and convinced in advance that you're a fine doctor—through the good work of your girl. Then when she comes to the office on Thursday at 3 she should be greeted promptly by your girl with a smile, and assured that she'll be seen very soon. She'll feel welcome and be a cooperative patient—if you see her without much delay.

Nelson J. Young, a Detroit professional management consultant, delivered this address at the Conference on Public Relations sponsored by the Texas Medical Association September 26, 1959, in Austin.

If you don't see Mrs. Smith within about 15 minutes of her appointed time, your good patient relations suffer—and you'd better find out what's wrong with your appointment system.

The patients' time is valuable to them, and they deserve common courtesy. In making a phone call we have all hung up before letting it ring 10 times—that would be only 1 minute—yet it seems like a long time while we're waiting.

There's the point. Time is flying for you and your girl—you're busy—but it drags for patients who are just waiting.

Try to keep the waiting period down. If you're delayed by an emergency, your girl should state the facts: "We're going to be a half hour late; would you like to make a phone call, get a coke, or run an errand—you won't lose your appointment."

Don't let your girl say, "Doctor will be a few minutes late" when you know very well it will be a full hour.

If at 3 o'clock you're running an hour late, your girl can phone the 4 o'clock appointments and ask if they would like to come in at 5. Maybe they're having dinner guests and must get home by 5—they will be glad to make an appointment for another day.

Evidence of consideration builds patient relations and good will.

Have the reception room comfortable for patients. An obstetrician was going to get some good looking modern chairs—very low. I had him sit in one, put a portable typewriter in his lap, and said, "You're 8 months pregnant—now get up." He got the point and ordered standard height chairs.

Have adequate lighting and current reading material; plastic covers keep magazines clean.

Providing Advertised Service

Finally, the patient gets to see you, and you will provide the advertised service.

Patients crave a sympathetic listener. A common complaint today is that "the doctor didn't seem interested in my trouble." Even a few minutes may be enough, if your attention is undivided and if you give the impression that for those few minutes that particular patient is the most important person in the world.

After I go to the trouble to come to your office at a time set for your convenience, I deserve your full attention. I'll resent your talking to some other patient who's using the telephone as an easy way to butt into our conversation. While you're talking to a patient, telephone interruptions should be limited to other doctors, the hospital, or other emergencies.

Avoid "talking down" to patients. Explain fully, without depending on technical terms. Babies "vomit" or "throw up," they don't "regurgitate" for the typical mother. On the other hand, you had better not use "regurgitate" and then define the word—some people will be offended, feeling that you are insulting their intelligence.

There is a narrow line between "talking down" to patients and adequately informing them. Explanations should be tailored to the level of the patient.

Before I was in professional management, my little girl was wheezing after she aspirated a piece of raw carrot. A physician prescribed elixir of terpenhydrate to dissolve the carrot. I asked him how medicine swallowed would get into the bronchi—he got pretty red in the face and dismissed me by saying to bring the child back in a week if she was still wheezing! We took Sally to a pediatrician who got a surgeon for bronchoscopy, and inside of 2 hours the foreign body was removed. That M.D. who told me terpenhydrate by mouth would dissolve carrot in the lung insulted my intelligence and did neither himself nor the medical profession any good.

Show sympathetic understanding of the patient's

problem by such phrases as this, "If this were my own daughter or my wife, I would want her to have this operation."

Many doctors find their time wasted in trivial conversation with patients who have become friends. We have found that a professional, efficient attitude on the part of the doctor tends to minimize general gossiping. Your friends expect a friendly greeting, but once the professional consultation is over, they'll take the hint in, "Gosh, I'd like to hear about your hunting trip—but there are a bunch of people waiting—let's get together sometime after hours."

Preservation of a pleasant professional attitude during office hours can save a lot of your valuable time.

Financial Problems

Part of the patient's problem is financial. What do your services cost?

He may hesitate to ask, but really wants to know. If it's surgery or obstetrical care—there has to be some budgeting. Of all complaints received by the mediation committee of my county society, almost one-half were on fees or misunderstanding of insurance coverage.

The patient may have been paying premiums for years on insurance he thought would meet your whole bill. Here's an extreme case: emergency room procedure, debridement, tetanus shot, seven stitches. Total insurance payment, including office call for removal of stitches, was $2.50.

If insurance pays $60 for *delivery,* the patient and her husband should learn why your fee is $175—it covers prenatal care, delivery, and postpartum care of mother and child.

Payments should be made at prenatal visits for the family's own ease of budgeting. "Mrs. Smith, it's a wonderful relief to know the baby's paid for when you go to the hospital." Incidentally, delinquent accounts are greatly reduced by prepayments.

A legitimate fee for major surgery may seem an exorbitant amount to a patient if there has been no prior explanation. Five hundred dollars to a man incapacitated for work can be a staggering amount. However, if he can get back on his job because of surgery, payments of $50 a month may seem easy, and the plan makes the same fee seem reasonable.

Here's a specific instance. The fountain clerk in our drug store was examined by a gynecologist—dilatation and curettage recommended, fee $60. She had the D. and C. done by an osteopath who told her it would cost $75, but spread over 5 months after she got back to work. She couldn't raise $60, but she could pay $15 a month.

The American public is preconditioned to monthly payments—house, auto, TV. Their problem is budgeting pay checks, not investing cash. They need to have surgical, obstetrical, hospital care fees explained in terms of their thinking—spreading payments. Who should do this? You should show you understand their financial problems; then your girl can work out details, note the arrangements on the financial card, and follow through with the patient.

We find that hospital consultations often turn into bad debts. What's worse, they often leave patients thinking they have been badly overcharged.

Here's a reply to our letter asking "how come no payment" for a cardiologist: "I do not feel that I owe this bill. I did not know Dr. ..... and I never asked him to examine or treat me in any way. When he came in my room, I thought he was from the hospital. I paid my bill for the operation and nothing was said about any other charge. If my doctor ordered Dr. ..... to see me, it is up to him to pay him." Here's some damage to public relations. In the eyes of this patient, this doctor is trying to get $15 for nothing.

Several things are wrong:

The surgeon should have explained to the patient or to a representative of the patient that because of his cardiac condition a heart specialist was advisable—that the added cost of consultation would be a wise investment.

Then the cardiologist should have introduced himself as calling on consultation at the request of the surgeon: "As I expect he explained, I specialize in heart conditions."

Consultation dignified in such a way would carry the weight it deserves in the eyes of the patient. In the same way, the function of the anesthesiologist should be explained—it is for the benefit of the patient.

Here's a point that may have escaped you because of your training: the terms "intern" and "internist" sound too much alike. Many people think a consultation by an internist is simply a visit by a house staff intern. Do you wonder they protest a consultation charge?

How should delinquent accounts be handled? One young neurosurgeon intended to turn over all accounts not paid in 3 months to his attorney for threats or suit. The other extreme is shown by a doctor who does not regularly send statements, and then makes no effort to collect. We have seen 10 times the normal delinquent accounts receivable recently in such an office—and that doctor was really hurting for income.

Every patient who owes a bill should receive a statement—he deserves to know his obligation so he can plan for payment. We are convinced that patients are as pure as Ivory soap—99.44 per cent intend to pay fair fees for good medical care.

Summing Up

The principles of sound merchandising which have been discussed do not conflict with professional ethics —for both are based on integrity and honest service values.

Patients need *understanding,* as well as medical care. They deserve *consideration,* and in turn they will pay their doctor bills.

With patients well satisfied with their own doctors, socialized medicine involving loss of choice will have little appeal, and the American physician can continue to be the successful respected example of our democratic way of life.

Mr. Young, PM Detroit, 420 Madison Theatre Building, Detroit 26.

Early diagnosis of mitral stenosis is important as mitral commissurotomy at the opportune time offers great benefits. Because the condition may masquerade as another disease, diagnosis depends on the physician's awareness of the disease plus a complete clinical evaluation of symptoms supported by such diagnostic aids as roentgenography, electrocardiography, phonocardiography, and cardiac catheterization.

Mitral Stenosis: Aids in Early Diagnosis

DONALD J. LYNCH, M.D. JOHN F. GUSTAFSON, M.D.

Temple, Texas

WITH THE refinement of surgical and anesthetic techniques, cardiovascular lesions which once were considered hopeless now are amenable to treatment. The diagnosis and treatment of various conditions of the heart have assumed great importance and popularity.

Experience has emphasized that more attention should be paid to the "old fashioned" diagnosis of mitral stenosis. This condition frequently is overlooked or mistaken for congenital or other heart disease, with such deceptive diagnoses as recurrent pneumonitis, bronchitis, influenza, and asthma often hiding the unrecognized symptoms of mitral stenosis. It is the purpose of this paper to review the diagnostic features of this cardiac lesion, which basically is correctable.

DIAGNOSIS

Importance of Early Diagnosis.—In mitral stenosis, the importance of an early diagnosis cannot be overemphasized. This is true although the patient may be without clinical symptoms. For example, a young woman who has unrecognized mitral stenosis may present a difficult problem if pregnancy compromises her cardiac reserve. Also, it may be difficult to make a clinical diagnosis after atrial fibrillation, a common complication of mitral stenosis, has supervened.

When symptoms due to mitral stenosis appear, diagnosis becomes even more urgent. Surgical correction is feasible for these patients; and, in most instances, it is mandatory for rehabilitation. Generally, it is agreed that surgical treatment should be reserved for those patients who functionally have class II (slight limitation of physical activity) or greater impairment. As a group, patients in classes II and III (moderate to marked limitation of activity) are the best candidates for mitral commissurotomy, and they will achieve the most satisfactory results.

That the operation is safe and justifiable in these patients has been proved by Ellis' review of Harken's 1,000 consecutive cases.[2, 4] Among the second 500 cases reported in this series, surgical mortality was only 0.6 per cent. If the patient's condition had advanced to class IV (refractory congestive failure),

surgical mortality was high, 20 per cent. Furthermore, when congestive heart failure developed in these patients, irreversible pulmonary changes occurred simultaneously and perpetuated the failure.[6]

Parker and Weiss[9] demonstrated that medial hypertrophy of the pulmonary arterioles, followed by intimal fibrosis and medial sclerosis, effectively narrows the arteriolar lumen and increases the pulmonary hypertension. In addition, thickening of the basement membrane of the capillaries and metaplasia of the alveolar walls (with formation of cuboidal epithelium) interfere with gaseous exchange and contribute to progressive dyspnea. These changes are irreversible, and once established they are not affected by correction of the mitral obstruction. An appreciation of these changes which occur in the lesser circulation, secondary to simple mechanical obstruction in the mitral orifice, should encourage the desire for an early diagnosis.

Factors in Clinical Diagnosis.—A diagnosis of mitral stenosis is based on a thorough clinical history. Ideally, this means complete evaluation of all the patient's complaints and past illnesses. Frequently, a history of rheumatic fever in childhood or later can be obtained only by a diligent search. The patient often fails to appreciate that an attack of rheumatic fever in childhood may be related to his present illness, or he may not be aware of having rheumatic fever in one of its varied forms. A history of recurrent pulmonary infections, hemoptysis, dyspnea upon exertion, and/or nocturnal cough certainly should cause the physician to suspect mitral stenosis. Less obvious complaints as cigarette cough, breathlessness, fatigability, and asthma, which usually occur later, should not be treated without thorough evaluation. Such a history, even though only remotely suggestive of heart failure, should incite the physician to search for a correctable lesion such as mitral stenosis regardless of the age of the patient.

It should be remembered that the patient may appear to be in good health. The patient may have few, or he may be without, abnormal physical findings except for those related to the heart; and, there, they often are difficult to interpret. It is unlikely that the physician will take special note of every patient with slightly decreased blood pressure or soft pulse. Yet, these findings suggest a diminished stroke volume of the left ventricle. If the patient has been sitting in the doctor's waiting room for a long period of time, he has allowed his heart plenty of rest. Unless he is in frank congestive failure, auscultation of the lungs after such a period of rest may not reveal anything unusual, or possibly a few basilar rales in one or both lungs. This latter finding could be mistaken for primary lung disease (bronchitis or bronchiectasis) and treated as such. Therefore, exercising the patient may be worth the few extra minutes required. Minimal signs and symptoms of failure may be accentuated, and significant murmurs may be detected.

Careful inspection and palpation of the anterior chest may reveal a bulge of the precordium, the impulse of an enlarged right ventricle, or a presystolic thrill. Although these findings are not too common in mitral stenosis and never are very obvious, the careful observer frequently is rewarded by their detection because he has trained himself to look for them.

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The value of auscultation in the detection of mitral stenosis should not require emphasis. The examiner should exercise great care because attention to detail is important. The second pulmonic sound is accentuated. The first mitral sound is characteristically loud and forceful. In those patients in whom marked calcification of the mitral valve has not occurred, a third sound may be detected at the apex. This occurs quickly following the second sound and is the well known opening snap.

The murmur characteristic of mitral stenosis is heard best within a limited area of the apex with the bell stethoscope. It is diastolic in time; it may occur early in the diastolic or in the presystolic period; or it may even extend throughout the diastolic period. Before the findings can be recorded as negative, the patient must be examined while he is in the left lateral position following exercise. The characteristic presystolic rumble which is an accentuation of the diastolic murmur is an important finding. It may be absent, however, in very mild cases, and it will be absent if atrial fibrillation is present. Although it may be extremely difficult to detect, the early diastolic murmur will persist even in the presence of atrial fibrillation.[3, 7] Failure to elicit a diastolic murmur does not in itself exclude the diagnosis of mitral stenosis.

We do not expect the lesion of "pure" mitral stenosis to cause enlargement of the left ventricle, but this should not preclude careful percussion of the left border of the heart. If the left margin is increased beyond normally expected limits, two possibilities may account for the finding. A slight increase could

reflect enlargement of the right ventricle or positional change of the heart. A more substantial increase should cause the physician to suspect enlargement of the left ventricle and the probability of multivalvular lesions and, therefore, a different diagnosis.

Role of Diagnostic Aids.—In most instances, a consideration of the possibility of mitral stenosis, a thorough evaluation of the patient's symptoms, and a careful examination of the heart and lungs are sufficient evidence to exact a correct diagnosis. In our experience, however, a detailed history and physical examination do not always provide conclusive evidence for the diagnosis. Further diagnostic aids are indicated, especially if the physician has reason to suspect the presence of mitral stenosis or other cardiac disease.

A roentgenographic and a fluoroscopic examination of the chest are relatively simple methods to demonstrate the size and shape of the heart. The most obvious abnormality, and one which in most instances can be demonstrated roentgenographically, is prominence of the pulmonary conus and arteries. Either straightening or convexity of the upper left border of the heart results. The characteristic indentation of the barium-filled esophagus encroached upon by an enlarged or dilated left auricle can be demonstrated by fluoroscopy. This procedure, however, should be performed only by those persons experienced with cardiac fluoroscopy, or the finding should be interpreted with caution. For confirming the diagnosis, other roentgenographic findings may be of value. These findings include vascular calcification, double density of a dilated left atrium, and evaluation of the degree of enlargement of the right ventricle. Increased vascularity of the lungs may be noted. This, of course, indicates congestion.

The electrocardiogram may aid in confirming the diagnosis. In some cases, characteristic findings may be present. With "pure" mitral stenosis, the electrical position of the heart is normal or, perhaps, deviated to the right. The finding of broad, notched P waves, particularly in lead II, is suggestive of enlargement of the left atrium. This pattern, in fact, often is referred to as P-mitrale. In long standing mitral stenosis, changes compatible with right ventricular hypertrophy are not uncommon on the electrocardiogram. The finding of left ventricular hypertrophy should suggest other associated valvular disease.

An excellent method for confirming the clinical diagnosis and obtaining some idea of the degree of mitral stenosis is phonocardiography.[1, 5, 8, 10] It is a relatively simple procedure, completely innocuous to the patient, and it gives considerable clinical information. A murmur and an opening snap are confirmed visually, and the intensities of heart sounds are apparent. Occasionally, the phonocardiogram can emphasize an apical diastolic murmur of such low frequency that the ear cannot recognize it. An intriguing aspect of the phonocardiogram is its ability to demonstrate mitral stenosis even in the absence of a characteristic murmur because some of the most rigidly stenotic valves produce only a slight murmur or none at all. This is accomplished by measuring certain time intervals on the phonocardiographic tracing. The important measurements in mitral stenosis are those from the beginning of the QRS complex to the onset of the first heart sound (the Q-1 interval) and from the second heart sound to the opening snap (the 2-OS interval). These measurements may be made and actually are of their greatest diagnostic usefulness in the presence of atrial fibrillation. Wells[11, 12] has shown that the Q-1 interval corrected for a standard heart rate is prolonged beyond normal limits in mitral stenosis (0.07 seconds or greater). He has devised a formula whereby the severity of the mitral stenosis may be predicted if the 2-OS interval is subtracted from the Q-1 interval. From the figure obtained, it is possible to estimate, within limits, the therapeutic value of commissurotomy. However, from a more practical standpoint, evaluation of the clinical condition of the patient should suffice.

In some instances, mitral stenosis may be confused with congenital heart disease, and cardiac catheterization may be necessary to establish the diagnosis. In general, however, catheterization of the right side of the heart seldom is indicated. Catheterization of the left side of the heart should be performed only in very selected cases, but this procedure may yield beneficial information especially if concomitant regurgitation or other valvular disease is suspected.

CASE REPORTS

The following case reports emphasize some of the diagnostic features which have been discussed.

CASE 1.—A 25 year old woman (fig. 1) reported to the Scott and White Clinic for cardiac evaluation. Because a heart murmur was discovered during the course of a routine prenatal examination, a diagnosis of "congenital heart disease" had been made some years previously. Mitral stenosis was suspected by the referring physician.

A detailed history revealed recurrent tonsillitis in childhood, but rheumatic fever had not been diagnosed. Until the time of her first pregnancy, the patient was not aware of any physical disability, and, on the contrary, she had been very active in sports. During the fourteenth week of her pregnancy, a troublesome cough developed and persisted for about 6 weeks. The cough seemed to be precipitated especially by lying down. The remainder of the pregnancy and the delivery were uncomplicated. Subsequently, she had several more episodes of persistent coughing. For the first time, she became aware of dyspnea upon exertion. The latter symptom progressed to the point that hanging out the wash was a major effort. On physical examination, the patient appeared as a well developed young woman. The oral temperature was 98.8 F., the systolic blood pres-

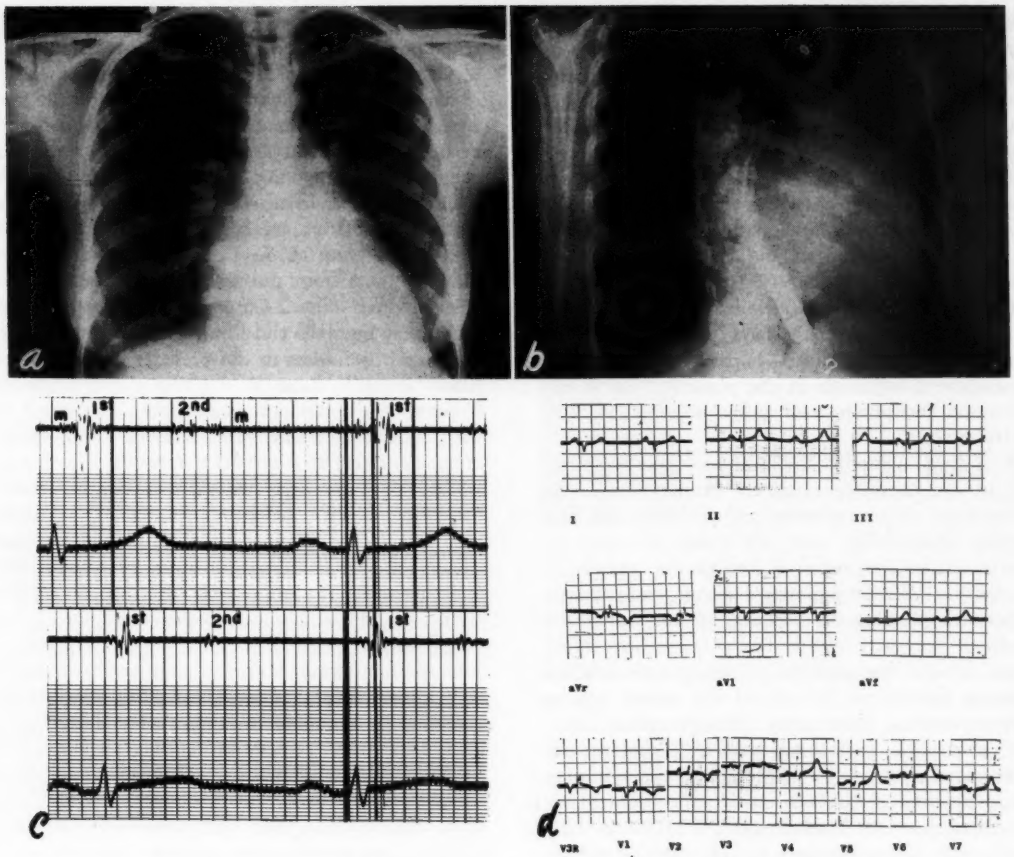

Fig. 1. Case 1. **a.** Roentgenogram of the chest, posterior-anterior view. Note prominence of the pulmonary artery segment causing convexity of the left border of the heart. Also, note the prominent hilar vessels and rounded shadow of double density due to the blood filled left atrium.

b. Right anterior-oblique view. Posterior displacement of the barium filled esophagus by the dilated left atrium is evident.

c. Phonocardiograms. Upper: Preoperative recording showing presystolic murmur and opening snap. Lower: Postoperative recording. The murmur has decreased, and the Q-1 time is shorter.

d. Electrocardiogram showing broad P waves and right ventricular hypertrophy.

sure was 90 mm. of mercury, and the diastolic was 50 mm. of mercury. The lungs were normal. A thrill was palpable at the apex. The heart rate was 80 beats per minute, and the rhythm was regular. The second heart sound at the pulmonic area was louder than the second aortic scund, and it was accentuated. A loud, rumbling, presystolic murmur with a prominent first sound was heard at the apex. A well defined opening snap was noted. Roentgenograms of the chest revealed moderate cardiac enlargement and increased prominence in the region of the pulmonary artery segment and left auricular appendage. Fluoroscopy with barium contrast studies showed prominence in the region of the left atrium. The electrocardiogram demonstrated right axis deviation, right ventricular hypertrophy, and broad and notched P waves. Results of the complete blood count and urinalysis were normal. The phonocardiogram confirmed a loud, accentuated first heart sound at the apex with a presystolic murmur and an opening snap. The duration of the Q-1 time was 0.117 seconds.

Mitral commissurotomy was performed. At operation, the leaflets of the mitral valve were partially calcified, and the valvular lumen was extremely small (an estimated 3 mm. in diameter). The valve was dilated digitally, and subsequently the pressure within the left atrium was reduced.

The postoperative course was complicated by transient auricular fibrillation and the postpericardotomy syndrome which responded readily to therapy. Postoperative follow-up 1 year later revealed symptomatic improvement. Objective improvement was evident on the phonocardiogram.

CASE 2.—A 19 year old woman (fig. 2) was referred to the Scott and White Clinic for investigation of recurrent pulmonary infections and questionable enlargement of the heart. She apparently had been in good health until February, 1957. At that time, she developed an infection of the upper respiratory tract which was followed by a severe cough. Shortly thereafter, she became acutely ill, was hospitalized, and a diagnosis of bilateral pneumonia was made. She responded to treatment, but some enlargement of her heart was observed by her physician. Follow-

ing that illness, the patient began to notice that with slight exertion her heart would beat rather rapidly. She developed a severe, chronic cough, and, on occasions, her sputum was streaked slightly with blood. Some 2 months prior to her first admission to this clinic, she again developed a pulmonary infection with fever of 103 to 104 F.

A review of the patient's past history was noncontributory. A previous episode of rheumatic fever was not indicated either by name or by symptoms. However, she had been subject to tonsillitis prior to tonsillectomy in 1954.

On physical examination, she appeared somewhat pale, but was well developed and well nourished and not in distress. The pertinent physical findings were limited to the cardiovascular system. The systolic blood pressure was 100 mm. of mercury, and the diastolic was 70 mm. of mercury. Cardiac enlargement was not evident to percussion. No precordial thrills were palpable. The cardiac rhythm was regular. The second pulmonic sound was greater than the second aortic sound and was accentuated. The first mitral sound was abnormally loud. A low pitched, crescendo, presystolic rumble was heard at the apex, and an intermittent, but definite, third sound was interpreted as an opening snap. With the patient in the left lateral position, the second heart sound was indistinct, and the presystolic murmur was pronounced. A systolic element could not be detected. The lungs were normal.

Complete blood counts and urinalyses were within normal limits. The electrocardiogram was suggestive of atrial enlargement, right axis deviation, and right ventricular hypertrophy. Roentgenograms of the chest revealed that the left border of the heart was straight, with a slight prominence in the area of the pulmonary artery segment. The hilar markings were slightly increased. The barium swallow indicated enlargement of the left atrium. The phonocardiogram revealed a murmur at the apex throughout diastole with presystolic accentuation. The Q-1 time was

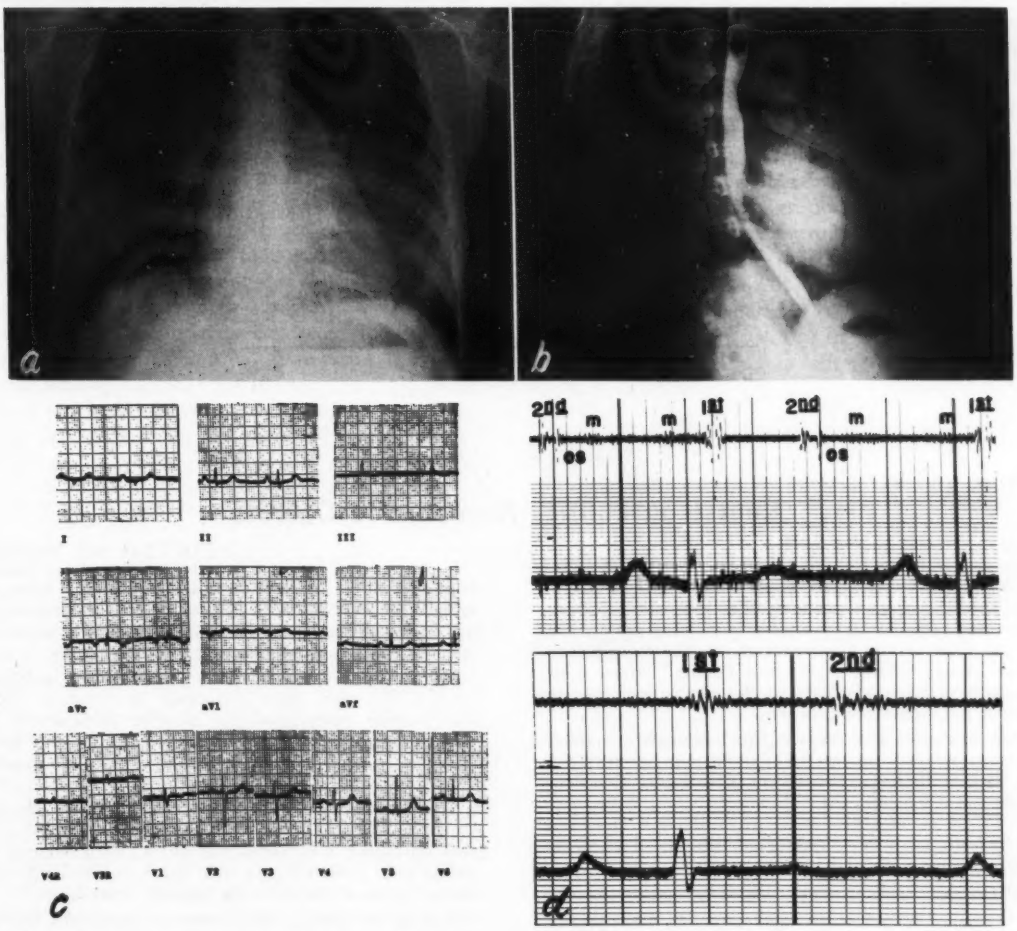

Fig. 2. Case 2. **a.** Roentgenogram of the chest, posterior-anterior view, showing the convex left border of the heart due to a prominent pulmonary artery segment and increased hilar vascularity.

b. Right anterior-oblique view. Posterior displacement of the esophagus is caused by a dilated left atrium.

c. Electrocardiogram showing prominent P waves and suggestive enlargement of the right ventricle.

d. Phonocardiograms. Upper: Preoperative recording showing diastolic and presystolic murmur, well defined opening snap, and prolonged Q-1 time. Lower: Postoperative recording demonstrating shortened Q-1 time and marked decrease in the murmur.

0.10 seconds. A third sound compatible with an opening snap was present.

At the time of mitral commissurotomy, the valve orifice was almost occluded. A small amount of calcification was present in the valve. Following dilatation, a satisfactory decrease in pressure in the left atrium was accomplished.

The patient's postoperative course was uncomplicated. Follow-up examination 11 months later revealed that the patient was progressing satisfactorily. A marked increase in her capacity for exercise had been noted.

SUMMARY

The importance of an early diagnosis of mitral stenosis before the onset of complications or irreversible changes cannot be overemphasized. The condition frequently masquerades as another disease and may be misdiagnosed or overlooked. Diagnosis often depends upon the physician's awareness of the disease, plus a complete clinical evaluation of the patient's symptoms supported by the necessary and appropriate diagnostic aids. Mitral commissurotomy, at the opportune time, offers great benefits with little operative risk to the patient.

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Course on Politics Available to Doctors

In answer to the plea all over the nation for physicians to take a more active part in the whole area of politics, public affairs, and community life, physicians in many states are participating in an education program designed by the Chamber of Commerce of the United States entitled "Action Course in Practical Politics." About 1,500 groups have taken advantage of this nonpartisan program since it was begun last February.

Any organization or business firm interested in sponsoring such a course can get full information by writing to the Business Relations Department, Chamber of Commerce of the United States, 1615 H. Street, N.W., Washington 6, D. C. A set of course materials including a Discussion Leader's Manual, a set of eight pamphlets, and a set of case problems costs $18.

The leader's manual shows how to set up the "Action Course" by organizing and conducting the group discussions. The manual contains a complete blueprint of the course. The leader need not have had previous experience in politics or adult education work.

In preparation for each weekly session, course participants read one of a set of eight pamphlets on the American political system. Each pamphlet deals with a different facet. Practicing politicians from both major political parties assisted in preparation of these texts.

Participants also work with a series of case problems common to almost every community in America. These cases prepare participants for effective participation in politics by helping them develop ability to analyze their own local political problems and to work out suitable solutions.

At the American Medical Association's recent clinical session in Dallas, Dr. Louis M. Orr, President, said, "A physician cannot, if he values this nation's high standard of medical care, divert his gaze from the social, economic and political issues which affect the practice of medicine."

"I think we have a double duty—as physicians and as citizens—to take an even more active part in the political and civic life of our nation, state and community," he said.

Serum Abnormalities in Multiple Myeloma and Other States

The various techniques in protein chemistry have supplied important details regarding the functions of normal and abnormal proteins in multiple myeloma and related conditions. Hypogammaglobulinemia, hyperglobulinemia, hematologic abnormalities, hemorrhagic tendency, purpura hyperglobulinimica, macroglobulinemia, cryoglobulinemia, Bence Jones protein, and amyloidosis are discussed.

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IN THE YEAR 1845 Drs. MacIntyre and Watson attended "a 47-year-old grocer who had been out of health for 13 months with peculiarly fragile bones," and they noted that "the patient's urine was strongly charged with animal matter." Some of this urine was sent to Dr. Bence Jones for analysis, the results of which were published in 1848.[3] Dr. MacIntyre finally published the clinical details of this interesting case in 1850.[7] In the following years other observers have added many pathologic and clinical details to these first observations of a relatively rare disease entity. As Dr. Bence Jones' findings of a peculiar protein in the urine of this first patient attracted considerable interest, the subsequent finding of many other protein abnormalities in this disease has served to emphasize that aspect of the disease.

REVIEW OF METHODS

The protein abnormalities in multiple myeloma have been investigated by each new technique in protein chemistry, and such investigations have furnished important details regarding the functions of normal and abnormal proteins. Some of these methods deserve comments regarding the information they furnish and their limitations.

The Howe method of fractionating albumins from globulins by sodium sulfate precipitation is limited by the fact that some abnormal globulins occasionally precipitate with the albumin fraction. Dr. Edwin Cohn developed for the Red Cross during World War II very precise methods for fractionating serum proteins into many components by low temperature alcohol and heavy metal precipitation. These methods have been of tremendous importance in the great advances made in protein chemistry, and today they are the methods of choice for the isolation of protein components but are time consuming and require precise control of pH, salt concentrations, and temperature.

Electrophoresis, on the other hand, separates proteins as a function of their electric charge into albumin and alpha, beta, and gamma globulins. The classical Tiselius, or moving boundary, technique is important as a research instrument, but the newer and simpler paper electrophoresis method[2] has made possible the widespread clinical use of the electrophoretic method. It should be emphasized that although albumin separated electrophoretically is a relatively pure protein, each of the globulin fractions represents large numbers of different proteins with similar electrophoretic properties. The ultracentrifuge separates proteins as a function of their mass, the heavier proteins sedimenting faster than the light proteins in a gravitational field. The rate with which a protein sediments is proportional to its Svedberg sedimentation constant or S-value. Normal gamma globulins have a constant of 7 S while the heavier globulins are 19 S and higher. Ion exchange chromatography, recently adapted to the study of proteins, involves the percolation of protein solutions over charged resins, primarily cellulose derivatives, a process which serves to separate proteins primarily as functions of isoelectric points, total exchangeable ions, and mass. This method, as adapted to serum

Dr. Robert B. Giles, Jr., assistant professor of internal medicine at Southwestern Medical School of the University of Texas, presented this paper for the Section on Internal Medicine at the annual session of the Texas Medical Association in San Antonio, April 20, 1959.

globulins, however, does separate the globulins as a function of their mass, a method which, because of its relative simplicity, augments the ultracentrifuge as a means of determining size or mass of these globulins.

Finally, immunochemical techniques using agar diffusion have been helpful. This process involves the diffusion through agar of antigen and antibody, forming a visible linear precipitate where the two meet in optimum concentration. Although antigen-antibody reactions may be specific, it should be remembered that coupling of the antigen and antibody occurs on a small portion of the total surface area of the molecules involved, which may explain why proteins which are in general chemically dissimilar may react with the same antigen provided their reacting areas are identical; or why, on the other hand, two proteins which are chemically almost identical may not react with the same antigen, provided their reacting areas are slightly altered.

Gamma Globulins.—Insofar as the major protein anomalies observed in multiple myeloma involve the gamma globulins, the normal gamma globulins should be examined more thoroughly. Electrophoretically the gamma globulins may be divided into gamma-1 (γ-1) and gamma-2 (γ-2) globulins, the latter normally constituting 95 per cent of the gamma globulin fraction and having the slower mobility. In the ultracentrifuge, the γ-1 globulins consist of 7 S and 19 S molecules while the γ-2 globulins are entirely 7 S. The gamma globulins therefore seem to be a mixture of proteins of various sizes but nearly the same electrophoretic mobilities. The γ-1 and γ-2 globulins do appear, however, to be similar in immunologic behavior, apparently at least having some common identical antigen binding sites.

PATHOPHYSIOLOGY

Multiple myeloma is a neoplasm of plasma cells characterized by disorderly and uncontrolled growth and function of these cells. Insofar as the plasma cell is probably the major site of formation of gamma globulins and antibodies, it is not surprising to find abnormalities of serum globulins where there is disordered growth of these cells. Lymphocytes are also thought to synthesize antibodies, and indeed overproduction of abnormal globulins also has been observed in various lymphomas. Although many of the clinical manifestations of the diseases, multiple myeloma and lymphoma, are the result of tissue invasion and destruction by the abnormal cells, many other manifestations appear to result from the anomalous gamma globulins synthesized by these cells.

The various protein abnormalities observed in these diseases and some related conditions now will be presented and related where possible to the clinical manifestations for which they may be responsible.

Hypogammaglobulinemia.—Abnormally low concentrations of normal gamma globulins frequently are observed in multiple myeloma[4] and apparently result from crowding out of normal plasma cells or at least a suppression of their normal synthetic processes. Such poor antibody synthesis in turn results in an unusual predisposition to severe infection such as pneumonia and septicemia. Furthermore, it has been demonstrated that these patients may have low or absent titers of blood group A, B, or O antibodies and furthermore may not develop antibodies to typhoid vaccine.

Hyperglobulinemia.—Simultaneously with the hypogammaglobulinemia, these patients frequently have increased concentrations of abnormal globulins or hyperglobulinemia. Approximately 70 per cent of patients with multiple myeloma have such a hyperglobulinemia,[9] which is readily detectable by a total protein estimation with an albumin-globulin ratio by the Howe method. The widespread use of paper electrophoresis, however, has been of additional aid in the detection of many unsuspected cases of multiple myeloma because of the unusual pattern that is frequently manifest. Normal gamma globulins present as a broad, even electrophoretic band, but the myeloma proteins characteristically are manifest as a "spike" or narrow band of electrophoretic mobilities, which is almost pathognomonic of myeloma. Such an abnormal electrophoretic "spike" is found in the gamma globulin region in 55 per cent of patients with myeloma, in the beta region in 15 per cent and in the alpha in 5 per cent. The interpretation of this abnormal electrophoretic spike is that the myeloma cells overproduce only one of the spectrum of normal globulins. Chemically the myeloma proteins obtained from different patients vary not only in their electrophoretic properties, but also slightly in their N-terminal amino acids, even though in the ultracentrifuge most have the same molecular weight (160,000) and identical sedimentation constants (6.6 S). Immunologically, however, despite these minor structural differences, myeloma proteins are closely identified with the normal globulins.

Hematologic Abnormalities.—Approximately 60 per cent of patients with myeloma have an anemia, and furthermore the first manifestation of the disease in some may be an acute hemolytic anemia which may be caused by coating of red cells with abnormal myeloma globulin resulting in hemagglutination. In addition, rouleau formation, which is commonly observed, may be explained by the same mechanism. Leukopenia, observed in 40 per cent of patients with

myeloma, and severe thrombocytopenia, observed in 25 per cent, probably result from bone marrow invasion by the plasma cells, although a similar agglutination phenomenon may play a part.

Hemorrhagic Tendency.—Hemorrhagic tendencies, observed in 35 per cent of patients with myeloma, may be manifest by epistasis, hemoptysis, petechiae, and purpura. Although in some instances thrombocytopenia appears to be responsible, in other instances no demonstrable thrombocyte or clotting defect may be found. There is some evidence, however, that the myeloma proteins may interfere with the normal function of the clotting proteins. Recently Henstell[1] demonstrated that a myeloma protein may form a complex with fibrinogen which in turn coprecipitates with prothrombin and other accessory clotting factors. Others also have shown that the conversion of fibrinogen to fibrin may be delayed in myeloma serum.

Purpura Hyperglobulinimica.—Purpura hyperglobulinimica is a disease entity that has been described recently, characterized by Sjögren's syndrome (decreased lacrimation, keratoconjunctivitis sicca, dryness of mucous membranes, enlarged parotids, and chronic polyarthritis) and by relapsing purpura of the legs, with slight anemia and leukopenia. No other hemorrhagic symptoms are noted but there is hypergammaglobulinemia (broad peak) without macroglobulins. Although this entity has not yet been associated with myeloma, it is mentioned because it may be confused with multiple myeloma and the following disease, macroglobulinemia, and because it demonstrates again an association between hemorrhagic phenomenon and hyperglobulinemia.

Macroglobulinemia.—Waldenström was the first to describe and characterize a hemorrhagic syndrome called Waldenström's macroglobulinemia,[10, 11, 12] which is clinically characterized by lassitude, dyspnea, Sjögren's syndrome, anemia, bleeding gums, purpura, fever, and paresis. Although this syndrome has been associated with multiple myeloma in one instance, it usually is associated with abnormal lymphocytes, termed "shedding or naked lymphocytes." In distinction to the previously mentioned syndromes, an increase in the high molecular weight globulins, with a sedimentation constant of 20 S, is found. Chemically and structurally the macroglobulins differ from normal gamma globulins by a higher carbohydrate concentration and greater size. Furthermore, when these macroglobulins are treated with mercaptoethanol to split disulfide bonds, they yield normal gamma globulins by physical-chemical and immunological properties. Thus the macroglobulins appear to be polymers of normal gamma globulins of the 7 S size.

Cryoglobulinemia.—Cryoglobulinemia[5, 6, 8] is clinically manifest by cold intolerance, Raynaud's phenomenon, purpura, urticaria, skin ulceration, gangrene, retinal vascular stasis, and Sjögren's syndrome, and by the presence in the serum of large amounts of reversible, cold precipitating globulin. This syndrome is frequently associated with multiple myeloma, but also with chronic lymphatic leukemia, lymphosarcoma, subacute bacterial endocarditis, kala-azar, malaria, polyarteritis nodosa, rheumatoid arthritis, and lupus erythematosus, although large amounts of cryoglobulin are found usually only in multiple myeloma. The minimum amount required for a massive precipitate of the protein is 1 Gm. per 100 cc., but as much as 10 Gm. per 100 cc. may be found. The intravascular precipitation of these proteins by cold readily explains Raynaud's symptoms, and in addition cryoglobulins, like macroglobulins, may complex with certain of the clotting factors, thus explaining the hemorrhagic tendency.

Bence Jones Protein.—Bence Jones proteinuria is thought to be pathognomonic of multiple myeloma, and about 49 per cent of cases demonstrate it at one time or another. It occurs more often in the absence of hyperglobulinemia and is most easily detected by electrophoresis of the urine. Chemically this material is different from the myeloma protein, in that it is a small molecule with a sedimentation constant of 2.8 to 3.7 S and a molecular weight of 40,000 and it contains little if any carbohydrate.

Turnover rates of myeloma protein and Bence Jones protein[9] have been studied with radioactive tracers and have revealed that the Bence Jones protein is synthesized rapidly with maximum activity appearing 5½ hours after the tracer dose, whereas the myeloma protein has maximum activity in 10 hours. This is interpreted as evidence that the Bence Jones protein and myeloma protein are synthesized independently. Of interest, the daily excretion of nitrogen in Bence Jones protein may be as high as one-third of the total daily intake of nitrogen.

Amyloidosis.—The unusual association of amyloidosis with multiple myeloma was first pointed out in 1872, and probably occurs in 10 to 20 per cent of the cases of myeloma. The deposit of this abnormal protein in heart, skin, intestinal tract, tongue, and elsewhere mechanically interferes with the function of those organs. Furthermore, deposits in and about capillaries and small arteries are thought to be the cause of some of the hemorrhagic phenomenon seen with amyloidosis.

SUMMARY

Many of the protein abnormalities known to be associated with multiple myeloma and allied diseases are discussed and correlated where possible with the clinical manifestations of the disease for which the protein abnormalities may be responsible.

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Management of Endometriosis

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Choice of treatment of endometriosis depends on the patient's age, parity, desire for further childbearing, extent of disease, and associated pelvic disease. Observation in young patients with minimal disease, irradiation as a secondary aid, hormones for palliation, and surgery may be used in treatment.

THE RECOGNITION and management of endometriosis is a problem of major importance. All too frequently the disease is diagnosed from the history alone, a practice not without its dangers even for those with wide clinical experience.

SYMPTOMS AND DIAGNOSIS

The so-called classical symptoms of endometriosis are acquired or increasing dysmenorrhea, abnormal uterine bleeding, backache, dyspareunia, sterility, and rectal pain, particularly at the time of menses. All of these symptoms, however, may occur with other forms of pelvic disease. Further, quite extensive endometriosis may be present, yet not cause the patient any distress.

Of major diagnostic importance is the presence of nodules in the uterosacral ligaments or rectovaginal septum which may periodically, at the time of menstruation, enlarge and become more tender.

METHODS OF TREATMENT

Treatment should not be begun blindly. If possible, one should determine the extent of the lesion or lesions. If sterility is a consideration, every effort should be made to determine if other factors are present which would make it hazardous for the patient to become pregnant, or if other pelvic conditions can be expected to interfere with conception or pregnancy. Tubal insufflation studies and, where possible, culdoscopic examination, may be of great value in indicating the possible extent of treatment.

Finally, before treatment is begun, it is essential that an adequate explanation be made of the disease process, with its possible effect on the patient.

The choice of treatment is governed by the age of the patient, parity, desire for further childbearing, symptomatology, extent of lesion or lesions, and associated pelvic pathology.

In young women conservatism is the guiding principle in the treatment of the disease. By conservatism

is meant the minimal amount of treatment, medical or surgical, that may be expected to yield satisfactory results in any given patient. Therefore, the greatest problem in management is posed by the young woman who desires further pregnancy.

With these factors in mind, there are four avenues of approach available: (1) observation, (2) hormonal therapy, (3) irradiation of the ovaries, and (4) surgery.

Observation.—Observation is indicated in those women whose symptoms are of a minor nature and in whom palpatory findings are minimal. When laparotomy is performed for other disease, such as appendectomy, the pelvis should be inspected, for in a surprising number of patients endometriosis is an incidental finding. Removal or destruction of endometriotic lesions at this stage may spare the patient future distress.

Radiation.—Roentgen therapy has no place as the primary treatment of the disease. Frequently the symptoms are not due to the endometriosis but to the associated lesions which not only may fail to respond to irradiation but may well be aggravated by it. Without surgery, particularly in the older patient, other more serious conditions may be overlooked.

In selected patients, however, in whom conservative surgery has already been done and in whom there is a recurrence of symptoms severe enough to warrant further interference, radiologic castration may be done, particularly if there is some contraindication to further or more extensive surgery.

Hormones.—The use of hormones, androgenic and estrogenic, has found limited acceptance. There is no doubt that a large proportion of patients experience symptomatic relief during treatment and, in fact, may remain symptom-free for variable periods of time following cessation of therapy. Usually, however, the response to hormones is transitory.

Androgens, in large doses, probably act through the pituitary gland with attendant disruption of the normal ovarian cycle. Hirst[4] administered 150 to 225 mg. of testosterone propionate in oil intramuscularly over a period of 2 to 3 weeks, followed by 10 mg. of methyltestosterone orally for variable periods of time. There was rapid reduction of pain, tenderness, and swelling of cystic ovarian endometriosis, and 2 of 19 patients became pregnant while taking the drug. There was little retrogressive effect noted on fused masses and hard infiltrates.

Creadick[1] treated 25 women with 10 mg of oral methyltestosterone daily for 2 complete menstrual cycles, and omitted treatment in the following cycle. Virilizing effects to this dosage (240 mg. per month) were negligible, and 5 of this group of patients became pregnant, 2 while taking the medication.

Nevertheless, the possibility of unhappy and undesirable side effects to male hormones is very real, and these substances must be used with extreme caution, if at all. The response to androgens among my patients has been far from satisfactory.

Estrogenic substances likewise may halt progression of the disease for variable periods of time, with marked symptomatic relief to the patient. Haskins and Woolf,[3] in using oral stilbestrol, altered Karnaky's plan,[5] in order to minimize break-through bleeding. Their schedule is to give 1 mg. of stilbestrol daily beginning on the first day of the menses and increasing this by 1 mg. daily every 3 days until 5 mg. per day are given; 25 mg. scored tablets are then used, and the dosage is increased by one-fourth tablet, or 6.25 mg., every 3 days until a total of 100 mg. daily is taken. This dose is continued for 3 months, and then decreased by one-fourth tablet daily until the last dose is taken. Withdrawal bleeding follows about 2 days after the last dose is taken and lasts 7 to 10 days. Bleeding, while profuse, is not alarming. Of 15 patients treated by them, according to the plan outlined, 3 became pregnant within 1 year of completion of therapy. Symptomatic relief to stilbestrol among my own patients has been remarkable, but there have been no pregnancies.

Dr. Arthur B. Lunin, associate professor of obstetrics and gynecology at Baylor University College of Medicine, delivered this paper before the Section on Obstetrics and Gynecology at the annual session of the Texas Medical Association in San Antonio, April 20, 1959.

My experience with progestin and progestin-like compounds in the treatment of endometriosis is as yet too limited for discussion.

Surgical Management.—If sterility is the major complaint, the most satisfactory approach is surgical, even in the face of minimal findings, provided, of course, that no other cause for sterility can be demonstrated. Frequently, early surgery not only will prevent progression of the disease, but will permit fulfillment of the childbearing potential.

In the older patient, if adnexal masses are present, exploration is mandatory to rule out more serious disease.

The surgical management of those women in whom future pregnancy is not a consideration, whether because of age or personal wishes, does not tax the physician's judgment. Hysterectomy is the obvious choice.

In the young patient who desires further pregnancy, however, it is better to risk reoperation than to destroy the childbearing function.

Lesions involving superficial or unimportant structures may be removed or destroyed with the cautery.

Generally, however, resection of implants, where possible, is preferable to cauterization. Deep lesions are resected in proportion to the patient's age and parity. If only one ovary is involved extensively, it may be wise to remove the entire ovary to avoid the danger of reimplantation in this structure. Every effort should be made to release all pelvic adhesions.

Castration, and of course hysterectomy, usually will be necessary if there is extensive involvement of the bowel or urinary tract.

Suspension of the retroverted uterus and prolapsed adnexae is an essential part of the conservative surgical correction of endometriosis. If the uterus is not removed, presacral neurectomy occasionally helps in preventing the recurrence of crippling dysmenorrhea.

It must be borne in mind, however, that where the preponderant disease is in the ovary we may expect the response to presacral neurectomy to be less than satisfactory.

Excision of segments of the uterosacral ligaments, as advocated by Doyle,[2] may be of value if pelvic pain is a prominent symptom.

Early and frequent pregnancies should be urged for all young women with endometriosis, in the hope that the function of childbearing may be fulfilled before the disease, or its treatment, becomes too destructive.

SUMMARY

The diagnosis of endometriosis may afford considerable difficulty. The choice of treatment depends upon the patient's age, parity, desire for further childbearing, extent of disease, and associated pelvic disease. In the young patient observation is indicated if the symptoms and findings are minimal. Irradiation of the ovaries has no place in the primary treatment of the disease. Hormones are used mainly for their palliative effect.

The guiding principle in the surgical management of the disease is the destruction or removal of the least amount of tissue, consistent with the patient's age and parity, that may be expected to yield satisfactory results.

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ABSTRACT OF DISCUSSION

DR. MILTON TURNER, Austin: Endometriosis is a benign multiple phenomenon of endometrial tissue of doubtful etiology, and its clinical importance is due to the diversity of sites of implantation. Because of its symptomotology and because of the relatively young group that is involved, there is frequently associated a sterility problem.

One must emphasize that it is important to know that pathologically there are two types, the internal and external. The internal is known as adenomyosis and is not pertinent to this paper. The external, or endometriosis, usually consists of small blueberry spots, which may be black, tan, or colorless. One of its most important characteristics is that it reacts to estrogenic stimuli and bleeds at regular monthly intervals. This monthly activation causes surrounding irritation and inflammation and results in typical cysts. When the cysts are formed, bleeding occurs within the cysts at each menstrual period. Within the ovarian tissue, such bleeding results in the typical chocolate cyst, which tends to grow with each menstrual period. In time, it may perforate, and if the perforation is small, ahesions form between the cysts and the adjacent viscera. A veritable forest of adhesions may be encountered when operation is performed for endometriosis. This pathological process—cystic formation, adjacent fibrous tissue reaction, coalesence, perforation of cysts, and adhesion formation—occurs in varying degrees in all external endometriosis.

May I emphasize, as Dr. Lunin has, that the treatment should be sharply individualized. The variety of management allows considerable choice, and I am in complete accord with Dr. Lunin concerning his management via the four avenues of approach.

Expert observation may be carried out for long periods of time under a trial of hormones. Estrogenic hormones in increasing doses is my preference despite the fact that some have stated that estrogens may be carcinogenic. I have found, and this has been borne out by others treating endometriosis with stilbestrol, that the tumors and fibrosis in the pelvis seem to melt almost completely away, and at the time of surgery, makes the procedure much simpler. It is important to keep menstruation suppressed for a few months following conservative surgical therapy.

In general, surgery should be conservative in the younger age group, with preservation of the childbearing and ovarian function when at all possible. Endometriosis can be resected with relative ease. In endometrioma of the ovary I have resected cysts leaving normal ovarian tissue and have obtained surprisingly excellent results. This procedure should be associated with a nerve resection of some sort. This is preferable to castration. Following resection, if the transplants are not resected, the patient may continue to have trouble, for the ovaries control the implant. Following resection of cysts from the ovaries, recurrence has not been as great as has been expected. If one ruptures a chocolate cyst, or endometrioma of the ovary, it is not as catastrophic as it might appear, for it has been noted that the cells have all been burned out and do not seem to reimplant.

In the patient past 40, more radical management is indicated. The involvement is usually massive, and I believe a hysterectomy and bilateral salpingo-oophorectomy is the procedure of choice. In addition, resection of as many implants as possible should be carried out. However, with the removal of both ovaries the disease usually regresses without further ado, and, therefore, even on the rare occasion when the ovaries are normal, they should be removed.

May I repeat Dr. Lunin's caution that roentgen therapy has no place in the primary treatment of endometriosis, but may be used in those cases where conservative surgery already has been done and should there be contraindications for more extensive surgery.

By means of a Teflon tube sewed through the tissue, interstitial radium needles may be implanted at reduced hazard to personnel on the operating team. Various locations and the radiation patterns obtained are illustrated by pictures from some of the 150 cases treated using this technique.

Reduction of Radiation Hazards To Personnel Using Interstitial Implants

OSCAR L. MORPHIS, M.D., F.A.C.R.
Fort Worth, Texas

RADIUM THERAPISTS in this country are indebted to Dr. Charles L. Martin for his work and teachings in the control of certain carcinomas by the use of low intensity radium needles. He has shown that not only the primary lesion can be cured, but also metastatic nodes can be cured. His work has been confirmed by many physicians, and many cancer patients are alive today who otherwise would have died of their disease. Some of the early workers in the use of interstitial implants were Sir Stanford Cade of England, Drs. Douglas Quick, Maurice Lenz, Edith Quimby, Pitts and Waterman in America. Others throughout the world too numerous to mention also have contributed to this work.

Physicians who use interstitial low intensity radium implants are acutely aware of the inherent high level of gamma radiation which their technicians, operating room personnel, and particularly the physician himself receive during the preparation and implantation of multiple radium needles. These needles must first be prepared by the technician by placing threads through the eye of the needle and securing the threads with a knot. This results in exposure due to (1) time and (2) working in close proximity with the radium needle.

The next exposure is to the operating room personnel. The needles must be laid out in orderly fashion, making sure the threads are straight. These are brought from the back table to the operating field as needed. The physician implanting the needles must have his hands near the point of entrance and feel the tip of the needle to be certain of its course. This results in close approximation of the examining fingers to the needle. The needles must be sewed to the tissue and anchored securely, requiring time and resulting in additional exposure to radiation. If each needle is sewed in place and tied after each insertion, the operator is in effect working over half the total amount of radium for the duration of the procedure. The hands are in very close approximation to the radium already inserted in the tissues during the period the needles are being anchored.

The dosage may be reduced by one of four methods:

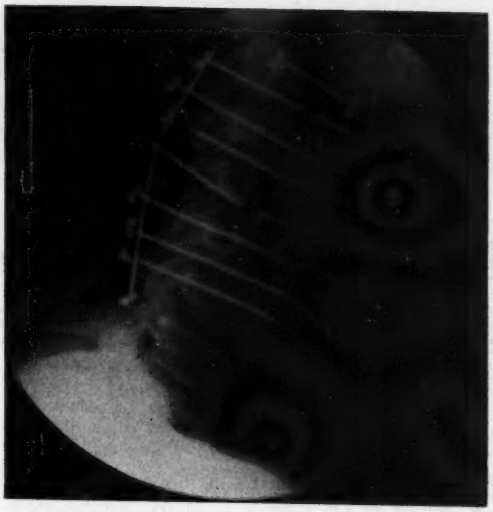
1. By keeping the total quantity of radium small and out of the operating field as long as possible.
2. By adding a lead or other protective barrier between the radium source and the operator. This is heavy and unwieldy and, therefore, impractical.
3. By increasing the distance between the radium sources and any part of the operating team.
4. Decreasing the time that the operating team is exposed to the radium.

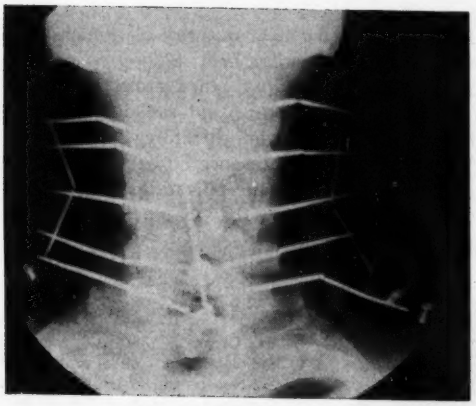
Dr. Oscar L. Morphis, practicing radiologist and clinical professor of radiology, University of Texas Southwestern Medical School, Dallas, delivered this paper before the Section on Radiology of the Texas Medical Association at the annual session in San Antonio, April 21, 1959.

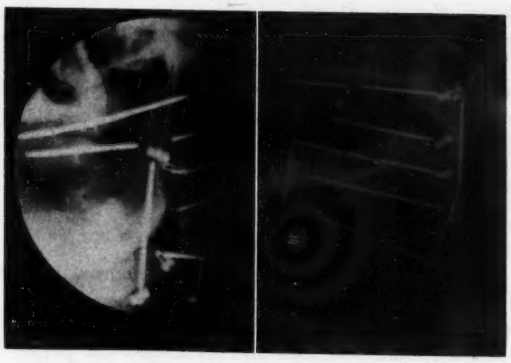
If we are to decrease our dose, we must depend on increasing the distance between the operator and the radium sources. This is most effective since the intensity of radiation decreases inversely with the square of the distance. We may further decrease the dose to the personnel by decreasing the time that radium is in the operating field.

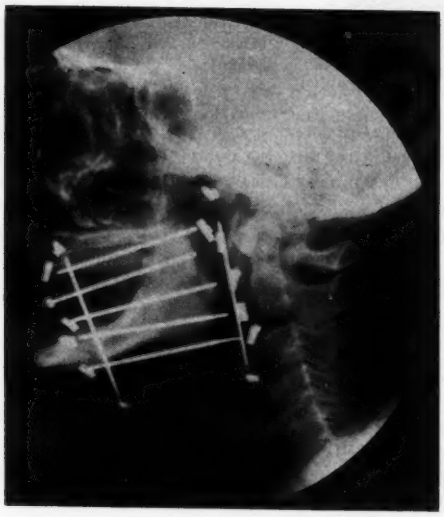
TECHNIQUE

A technique has been described in an earlier paper[1] which utilizes both principles. The details of the apparatus and materials may be found in that paper.









"Teflon" tubing fixed to a long atraumatic needle from 6 to 9 inches in length is sewed through the base of the lesion and the entire radiation pattern completely sewed into place. The point of entrance and the point of exit are constantly in view so that proper alignment and spacing of the tubes is easily attained. The fingers feeling the path of the needle are in no danger since the radium need not even be in the operating room while this procedure is carried out. One end of each Teflon tube is sealed with a Michel skin clip smashed against the tube. At this point the radium is first brought into the operating field; therefore, there has been no exposure to any member of the team to this point. The open end of the tube is held with a special forceps, the radium is picked up with a radium forceps and placed in the Teflon tube "eye" end first. A long stylette is used to push the needle into the proper position. As many needles as may be needed to fill the tube may be used. The loading end of the tube is then sealed with a Michel skin clip, and after the last tube has been filled and sealed, the operation is complete. Most procedures carried out in this manner expose the operator to radiation between 5 and 10 minutes and usually result in doses to the operator of less than 50 mr depending on the quantity of radium used and the speed of the operator.

A variation of this method is used in areas that do not lend themselves to through and through suturing such as in the pharyngeal wall or in the pelvis. A very short point, 3/8 inch in length, has been designed. This has a hole drilled in the threaded end. A piece of Teflon is screwed onto the point and a stylette with a small male projection is placed through the tube. The male tip of the stylette engages the hole in the point so that the entire assembly is stable and rigid. The tube is then inserted into a blind area to the proper depth, and the stylette removed. As many of the tubes as may be required for the proper radiation pattern are inserted. The radium is then brought into the field and the tube filled and sealed as before.

At the end of the period of radiation, one of the Michel clips is cut off and the entire tube with its radium content is removed. The technician merely cuts off the other Michel clip and pushes the radium from the tube using a small stylette. The needles are washed and returned to the radium safe.

Fig. 1. A 45 year old white woman had squamous cell carcinoma, grade 3, involving the posterior third of the tongue and pyriform sinuses vallecula, and extending down and invading the true and false vocal cords. Multiple metastatic lymph nodes were present on both sides of the neck. Radium was implanted May 3, 1957. The patient died of pulmonary metastasis 14 months later.

Fig. 2. A 54 year old white man had a large metastatic squamous cell carcinoma, grade 3, on the posterior third of the tongue. Radium was implanted February 1, 1957. The primary lesion in the tongue had been treated elsewhere. The patient remained clinically well 26 months after radium therapy.

Fig. 3. A 58 year old white man was seen September 6, 1956, with grade 3 squamous cell carcinoma of the larynx involving both true and false vocal cords and extending into both valleculae. The patient refused total laryngectomy and was referred for radium therapy. The patient was clinically cured 31 months later and had almost a normal voice.

Fig. 4. A 78 year old white man had grade 2 squamous cell carcinoma involving the entire left cheek with disease extending through the upper lip past the midline. Disease also extended onto the left upper gum. There were no palpable nodes in the neck. The patient was treated with radium April 1, 1957. He had remained clinically well for 2 years.

Fig. 5. A 66 year old white woman with grade 2 squamous cell carcinoma of the left cheek developing originally in the site where she carried her snuff brush was treated by radium implant in December, 1958.

Fig. 6. A 72 year old white man had squamous cell carcinoma of the serpigenous type involving the base of the ear, the pre-auricular area, the templar area, and a portion of the posterior surface of the right ear. The patient also had basal cell carcinoma of the right side of the chin.

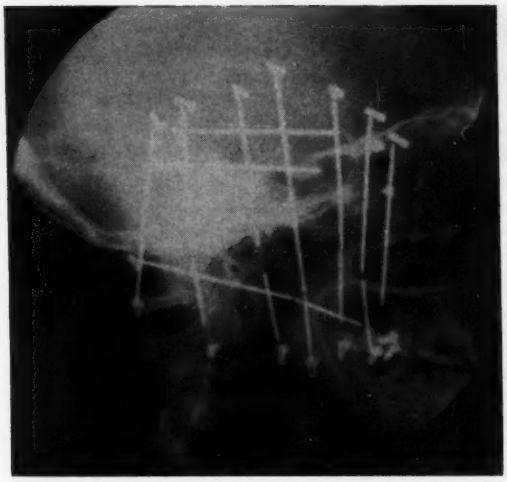


Fig. 7. A 71 year old white woman was seen June 30, 1958, with basal cell carcinoma elevating the right ear 2 cm. from the side of the head. The lesion extended from the outer canthus of the right eye to the posterior tip of the mastoid, and 4 cm. above and 4 cm. below the zygomatic arch. The face completely healed without skin graft, and no clinical evidence of the disease existed a year after radium therapy.

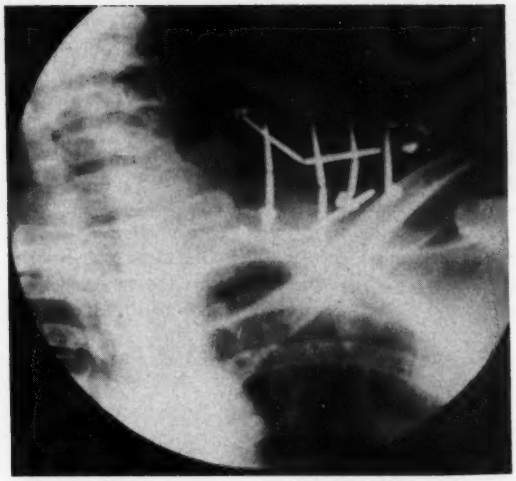


Fig. 8. A 53 year old white woman with metastatic squamous cell carcinoma to the cervical lymph node, with primary carcinoma of the cervix, was treated November 21, 1955. The patient remained clinically free of disease until February, 1958. The left supraclavicular node was removed and found to contain squamous cell carcinoma, probably from the cervix. Needle implant was carried out in April, 1958.

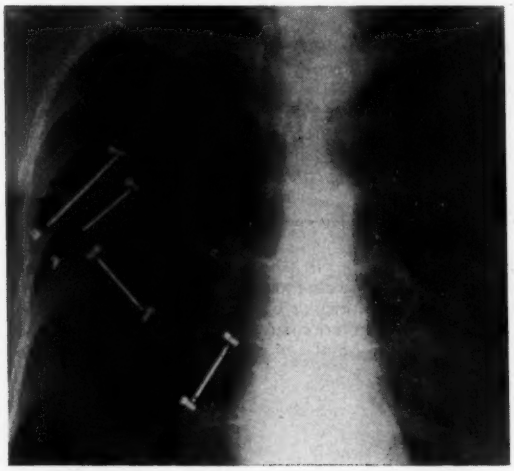


Fig. 9. A 48 year old white woman was seen first in 1953 with recurring skin metastases from carcinoma of the breast. She had had a radical mastectomy in 1944. The patient has had multiple skin metastases during the past 7 years. Individual needles have been placed in nodules as they occur. No systemic metastasis has been observed.

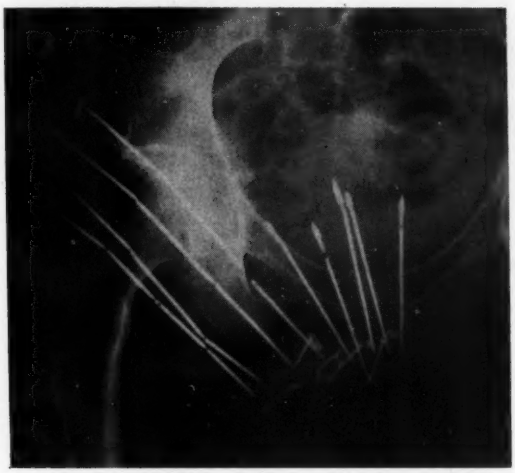


Fig. 10. A 56 year old white woman had grade 3 squamous cell carcinoma of the lower third of the vagina with a mass in the right labia majora and a 2 by 4 cm. mass in the mid right inguinal area. Radium was implanted September 29, 1958. The radiation pattern was continuous from the vaginal vault, the labia, and the entire right inguinal region. Two million volt x-ray therapy was given to the deep iliac and obturator lymph nodes avoiding the area of radium implant. The patient healed completely.

This method has been used in more than 150 cases during the past 33 months. The cases illustrated show various locations and the radiation patterns obtained.

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In selected cases surgery is the treatment of choice for epilepsy. In most cases careful medication is the only treatment. Work, social, and marital adjustment of the epileptic may be affected by his intellectual faculties, psychopathology, and use of alcohol. A careful neurological and psychiatric evaluation and an understanding of the patient's environment will help the physician care best for the epileptic.

EPILEPSY

Some Factors Influencing The Prognosis and Treatment

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EPILEPTIC SEIZURES represent a symptom of disordered physiology of the brain. Because of the number of disease processes which may produce seizures, few physicians are without experience in treating this symptom. The neurologist, psychiatrist, and neurosurgeon handle the majority of patients with seizures, yet not infrequently the internist, pediatrician, obstetrician, general surgeon, and most often the generalist will find himself in the position of having to treat seizures which may occur, as a symptom of brain disorder of unknown etiology, as a complication of unrelated disease, or as a symptom of a systemic disease for which the physician was consulted.

The majority of recurrent seizures, however, occur as a result of lesions of the brain of unknown etiology and in themselves are a disease process often referred to as idiopathic or cryptogenic epilepsy. In the past the responsibility for treatment of such disorders was relegated to the neuropsychiatrist in "epileptic colonies" and state hospitals where the epileptic was placed for the protection of society and himself. This situation arose as a result of the many psychologic manifestations of the disease and the frequent association of mental deficiency and so-called deterioration.

With modern advances in pharmacotherapy and surgical therapy the responsibility for the treatment of the disease has been returned in part to the physician in the patient's community. In spite of his efforts, however, the practitioner often finds that the patient becomes a social cripple unable to adjust even after apparently successful medical therapy.

In the past the reasons for such maladjustment have been difficult to discern since most research efforts have been directed toward an elucidation of basic anatomical lesions and physiologic mechanisms related to the seizure. Nevertheless, the recent emphasis on comprehensive medicine has stimulated a closer scrutiny of the problems which arise as a result of his disease and his adjustment to an often curious and/or rejecting society.[1, 4, 5, 9]

It is the purpose of this paper to attempt to discuss realistically some of the problems confronting the physician and to summarize some of the social and psychologic disturbances which may affect the physician's handling of these patients. Brief mention will be made of some of the findings in a small series of patients who were living in the community at the time the study was carried out and were in part being treated by their family physician.[10]

PROBLEMS IN MEDICAL TREATMENT

A complete discussion of the problems of the medical and surgical treatment of the epileptic is not within the scope of this paper, but brief mention should be given to the application of the more important methods of treatment and their limitations.

There is no question that the excision of epileptic lesions by surgery is the treatment of choice as a means of completely relieving the seizures. However, the application of surgery is limited to those patients who have discretely localized lesions in areas of the brain which do not involve vital functions. Such lesions are usually unilateral and restricted to frontal, temporal, and parietal lobes, preferably in the nondominant hemisphere. Patients with such lesions constitute only a small percentage of the epileptics seen.

Pharmacological treatments although more universally applicable are not always successful in controlling the patient's seizures. This in part is determined by the adequacy of medication and the attention paid by the physician to the regulation of the medication dosage. All too often the patient receives inadequate dosage, which results in less than optimum control of the seizures. On the other hand even

Dr. W. P. Wilson, director of psychiatric research and associate professor of psychiatry at the University of Texas Medical Branch, and his co-authors presented this paper from the Medical Branch and Duke University School of Medicine for the Texas Neuropsychiatric Association, April 19, 1959, in San Antonio.

when medication is adequate and all combinations have been tried, the patient may continue to have seizures which may be unmodified, attentuated, or reduced in frequency. Finally, there is a small group of patients who because of insufficient intellectual endowment or gross psychiatric symptomatology are unable to carry out the prescribed medical therapy.

The results of all treatments in medicine will depend on the cooperation of the patient, and it is often tempting to blame the failure of therapy on the patient's lack of cooperation. Such conclusions are not substantiated in fact since data obtained in a small series of 42 patients show that most patients who are benefited in any way will cooperate in their treatment by regularly taking their medication in prescribed doses.

The results of medical therapy in epilepsy will depend also on the acceptance of the patient's seizures by his family, employers, and people in the immediate environment. If the attitudes of these people are accepting, the patient may continue to lead a productive life in spite of his seizures. Yet in some environments one observed seizure a year may result in a complete breakdown of the patient's adjustment.

INTELLECTUAL FACULTIES

As Collins and Lennox[2] have pointed out, previous psychological studies carried out on patients with epilepsy often have been conflicting. There is no question that population selection has resulted in the variability of the average intellectual quotient in the groups reported. Studies based on indigent patients do demonstrate low intellectual ability. On the other hand studies based on private patients alone reveal evidence of superior intellectual function. The conflict is still to be resolved.

If the patient has been evaluated and found to be defective or of low intelligence, we should ask if this will influence his work adjustment since in the end we must assume that this critical adjustment is a sine qua non for the maintenance of the patient as a functioning member of society. In table 1 are summarized the data on 38 patients in whom work adjustment was correlated with the intelligence of the patient. It is obvious that in this limited group of patients intelligence was correlated with the ability to maintain gainful employment in the community.

TABLE 1.—*Correlation of Intelligence (I.Q.) with Work Adjustment (38 Subjects).*

Intelligence	Work Adjustment			
	Excellent	Good	Fair	Poor
Superior	1	—	1	1
Normal	5	2		7
Borderline	3	1	2	13
Defective	—	—	1	1

PSYCHOPATHOLOGY

A second area often overlooked in our treatment of the patient is the presence of clinically elicitable disturbances which constitute mental disease occurring as a result of, or concomitant to the epilepsy. The psychiatric disease in itself constitutes a handicap. In the presence of epilepsy this may be doubly handicapping. Table 2 summarizes the findings in 21 patients with epilepsy and psychopathology and the influence of the psychiatric disorder on their work adjustment. Again, as many of these patients were of borderline intelligence it is difficult to delineate the exact etiologic significance of either factor. Nevertheless, it would seem that psychiatric disorder does contribute to the quality of the patient's work adjustment.

TABLE 2.—*Correlation of Work with the Presence of Psychopathology (21 Subjects).*

Psychopathology	Work Adjustment			
	Excellent	Good	Fair	Poor
Psychotic	1	2	—	5
Neurotic	—	—	1	—
Character Disorder	—	—	—	2
Organic	1	—	—	3
Personality	1	2	—	3

ANTISOCIAL BEHAVIOR AND MARITAL ADJUSTMENT

The use of alcohol in the male epileptic may not be higher than would be expected; however, because of its influence on the disease process, the epileptic may be more adversely affected in his social relationships by its use. It appears that such is true. The patients studied by us showed a rather high incidence of chronic alcoholism. This use of alcohol surprisingly resulted in an increase in seizure frequency in only 21 per cent of the patients. Its major effect, however, was to increase the number of contacts with legal authorities since in most instances the epileptic was arrested for misdemeanors which were a direct result of the use of alcohol. The percentage of patients who used alcohol heavily and chronically (42 per cent) correlated well with those having encounters with the law (44 per cent). Examination of the

data revealed that the majority of the patients with one or more arrests were heavy or chronic users of alcohol.

The patient with a poor work adjustment was as well usually poorly adjusted in marriage. The data substantiating this observation are summarized in table 3. It may be inferred that this finding indicates that the attitudes of the patient or conversely the attitudes of his wife and employers were so altered that good interpersonal relationships were impossible. However, conclusions drawn from this data are at best tenuous since the presence of such disturbances as psychopathology, decreased libido, and alcoholism may all contribute to a poor marital adjustment which in turn may influence the work adjustment.

TABLE 3.—*Correlation of Marital Adjustment with Work Adjustment (33 Subjects).*

Work Adjustment	Marital Adjustment		
	Good	Fair	Poor
Excellent	6	2	1
Good	2	2	—
Fair	1	1	1
Poor	5	4	8

MANAGEMENT OF PSYCHIATRIC DISORDERS

Psychiatric disorders may be categorized into those symptoms which are related to the seizure itself. They are the so-called psychical phenomena of the aura, psychomotor behavioral disturbances, and postictal confusional states. The phenomena are usually controlled by controlling the seizures and represent no special problem other than a medical one. However, if these symptoms are associated with a lesion which is amenable to surgical excision, they are usually completely controlled.

A second type of psychological disturbance is the "oneirophrenic" or schizophrenic-like states which are often associated with physiologic damage to the brain. These often come about as a result of control of the seizures and the toxicity of the medication used, or may result from the damage engendered by uncontrolled seizures. The treatment of such states is difficult, and in our experience tranquilizers are probably most efficacious.

Schizophrenia occurring as a concomitant disease process is again difficult to treat. The popular concept of several years past that epilepsy and schizophrenia are antagonistic is untenable and certainly not substantiated by clinical observation. Our therapy of choice in this group of patients is again the use of tranquilizing drugs. More recently we have been using atropine toxicity therapy experimentally, with good results in 2 cases.

Affective disorders usually of the depressive type also have been seen not infrequently in epileptics. To determine the etiology of these disturbances is difficult; however, it is presumed that they may be either reactive or endogenous or both. Treatment is difficult and usually has been in the form of psychotherapy, usually of a superficial type associated with social casework aimed at making the environment less stressful.

Finally the character disorders and personality disorders[3, 6, 7, 8] are treated as if the patient had any chronic disease, usually with psychotherapy and making full use of social agencies in the community. It must be pointed out, however, that epileptics with frontal lobe lesions not infrequently behave in a psychopathic manner and their behavioral disturbances not infrequently disappear following the surgical excision of the epileptic lesion.

Intellectual deficiencies are not treatable; however, it is clear that evaluation of intellectual status is necessary in order that this factor can be taken into account in planning either the disposition or therapy of the patient.

CONCLUSIONS

In conclusion it should be pointed out that a careful neurological and psychiatric evaluation is necessary in planning for the care of the epileptic patient. However, in the final analysis it is the physician in the community who, with judicious use of available therapies, patience, and an understanding of the many factors influencing the epileptic's adjustment, will make possible the effective utilization of the epileptic as a useful, self supporting member of society.

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Intoxication from the ingestion of kerosene is a leading cause of accidental poisoning in the younger age group, particularly in the South. Of major importance is the syndrome produced in chemical pneumonitis. This pneumonia probably is produced by kerosene aspirated during the act of initial ingestion.

Kerosene Pneumonitis

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Frederick J. Bonte, M.D.
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THE PEDIATRICIAN and the physician who practices in the hospital emergency facility are familiar with the frequency of accidental poisoning in young children. There were 3,600 deaths in this group of patients in the decade 1940 to 1950. When the common noxious materials are categorized as to general type as was done by Bain[1] for the years 1949 and 1950, it is seen that more deaths from accidental poisoning in the 1 to 5 year age group are due to the ingestion of petroleum products than to any other single group of agents, surpassing in number the combined deaths due to salicylates and barbiturates. Kerosene is the most common petroleum product ingested in cases of accidental poisoning.

Although the frequency of hydrocarbon intoxication is great when considered on the basis of nationwide occurrence, if regional statistics are analyzed, they show the death rate in 12 selected southern states to be four times that for the nation as a whole. Even without formal statistical data, the regional nature of the problem is emphasized by the fact that the great majority of the literature on this subject emanates from the South. Texas authors lead the list.[2, 8, 10]

It seems probable that availability and climate are the factors most responsible for the frequency of kerosene intoxication in the South.[9] The use of kerosene as fuel for heating and cooking by the rural population and by indigent city dwellers is common. It becomes available to children because, all too often, it is stored in common drinking containers such as beverage bottles, glasses, and cups. In this attractive form, it offers strong appeal to the child more apt to be thirsty in the heat of the southern summer.

It is estimated that for every fatal accident among children there are at least 100 which result in varying degrees of morbidity.[3] The mortality figures cited thus are multiplied greatly, and the picture of kerosene intoxication emerges as one of major medical and economic importance. This is borne out by Foley,[5] who stated that kerosene intoxication accounted for 2.1 per cent of all children under 2 years of age admitted to an urban hospital serving a large rural area.

Waring[14] was among the first to emphasize the frequency and importance of pulmonary involvement in kerosene poisoning. Nunn and others[6, 10, 13] stated that the patient's course is largely determined by the existence and extent of pulmonary involvement. The incidence of pneumonia is shown to be high.[11] The mechanism of its production has been investigated by several.[5, 12, 7, 11, 4] Most studies agree that whereas kerosene may reach the lung by absorption from the

gastrointestinal tract, significant pulmonary involvement can occur only by aspiration. It is estimated on the basis of data from animal experimentation that a 50 pound child would survive as much as a pint of kerosene if none were aspirated, but as little as 1 teaspoonful may prove fatal if aspirated.[12]

Aspiration may occur during ingestion when the child will note intense burning of oropharyngeal mucosa causing an involuntary gasping inspiration. A history of vomiting, spontaneous or induced, can be obtained in some cases. This increases the opportunity for aspiration.

Kerosene is not a pure substance, but a hydrocarbon complex of aliphatic compounds containing impurities such as aromatic residues, sulfur, nitrogen, and caustic alkalies. It varies with the source of the crude petroleum and the method of fractionation. There is evidence to suggest that toxicity varies accordingly.[4]

Postmortem examination in fatal kerosene intoxication shows the fundamental lesion in all viscera to be vascular damage with cloudy swelling of the vessel walls and perivascular fluid extravasation. Gastrointestinal tract, brain, liver, kidney, and heart show these changes. Histologically, lung tissue shows these vascular findings associated with focal areas of acute interstitial inflammation, small hemorrhages, and exudate in the alveoli consisting of fluid, fibrin, and inflammatory cells.[4]

Clinical patterns observed in kerosene poisoning vary widely from the completely asymptomatic patient with no physical signs or roentgenographic abnormalities to the cyanotic, febrile child with clouded sensorium and with auscultatory evidence of extensive consolidation. The resultant syndrome will depend on many factors, among which are quantity ingested, type of kerosene, age of patient, occurrence of vomiting, and, most important, the quantity of kerosene aspirated.

From the clinical and experimental data assembled in this study it is apparent that roentgen examination of the chest furnishes information of importance concerning the prognosis and management of all patients with a history of kerosene ingestion regardless of the physical findings noted when the child is first observed. Kerosene pneumonitis results in a readily recognizable distribution of infiltration on the chest film which occurs early and may be seen even before auscultatory signs are present.

CLINICAL MATERIAL

The patients included in this study, all children ranging in age from 13 to 72 months, were observed in the emergency facility of Parkland Memorial Hospital (Dallas) because of the ingestion of kerosene during the years 1952 through 1954 and in 1956. Fifty-two such patients were seen during this period. Forty-seven of these had one or more chest roentgenograms, and only these are included in this series. The average child was approximately 21 months old and of a family in the lower income group. All survived the illness. In more than half the cases the amount ingested was unknown. It was crudely quantitated by the parents of 18 and ranged from a questionable 6 ounces to a "teaspoonful." There was a positive correlation between the amount ingested and the severity of clinical symptoms, extent of pulmonary infiltration on the roentgenogram, and duration of hospitalization.

A history of vomiting, obtained in only about one-third of the cases, showed no real correlation with the severity of the ensuing illness. This is in accord with Reed's data.[11] A history of "choking" or "strangling" was commonly encountered, and it would seem that kerosene typically gains access to the lungs during initial ingestion when its irritant action on oropharyngeal mucosa causes involuntary gasping inspiration. The aspiration of kerosene-tainted vomitus may affect the course of the occasional patient, but it was not a major factor in this group. Similarly, treatment by gavage, strongly condemned by some who feel that it often results in inadvertent aspiration of gastric contents, was frequently employed without apparent increased morbidity in the group so treated. It was generally omitted in the alert child with minor physical findings.

Physical examination of the lungs resulted in signs consistent with the presence of pulmonary consolidation in only 19 of the 47 patients. However, radiographic evidence of pneumonia was present in all but 3 patients. Eight of the 28 children who seemed free of clinical signs of pneumonia were seen to have major infiltration when examined roentgenographically. The presence of pulmonary infiltration as seen on film was intimately reflected in the severity of the clinical course. Clinical pneumonia did develop in a number of these cases in 12 to 24 hours.

The chest roentgenogram proved not only an exact means of prompt discovery of pulmonary involvement allowing early definitive therapy but, when interpreted in terms of the magnitude of the infiltrate, could be used as a rather precise measure of

Dr. Jack Reynolds of Dallas presented this paper before the Section on Radiology at the Texas Medical Association's annual session, April 20, 1959, in San Antonio.

prognosis in terms of duration of required hospitalization.

The infiltrations were classified after the method of Foley[5] by measuring the area of lung field opacified on the posterior-anterior film in this manner: grade 0, no infiltration; grade I, less than 10 per cent of the lung area involved; grade II, more than 10 per cent but less than 30 per cent of the lung area; and grade III, more than 30 per cent involved. By this method our material showed in grade 0, 3 patients with an average duration of hospitalization of 2 days; in grade I, 25 patients with an average hospitalization of 3.8 days; grade II, 16 patients with average hospitalization of 6.4 days; and grade IV, 3 patients with average hospitalization of 10.7 days. The average duration of hospitalization of the 47 patients in this study was 5.3 days.

The distribution and appearance of the infiltration in roentgenograms in this series was believed to be characteristic of kerosene pneumonia and readily recognizable. Aside from a somewhat uncommon variant which may reflect pulmonary changes due to the blood-borne kerosene, the fundamental picture suggests an aspiration pneumonia with involvement of dependent segments. Of these films which showed pneumonia, the most common distribution was bilateral basal (fig. 1). Thirty-six patients showed this pattern. Five other patients showed involvement of the right base only (fig. 2). Three patients showed evidence of pulmonary involvement by the presence of hazy, confluent bilateral perihilar infiltration with clear lung bases (fig. 3). This was termed the "edema" type and may well be a manifestation of the fundamental lesion produced in all organs when absorption from the gut is of sufficient magnitude and the blood-borne poison alters vascular permeability with resultant fluid extravasation and edema. Unfortunately, the amounts ingested by this group were not known. As might be expected, 4 other patients whose major lung lesions were bilateral basilar infiltrations showed evidence of "edema" type pattern combined with the common "aspiration" appearance. One of these patients was known to have consumed 200 cc. of kerosene. His clinical course was stormy, and he was hospitalized for 19 days.

Fig. 1. Eighteen month old Negro girl. Film taken approximately 1 hour after the ingestion of an estimated 200 cc. of kerosene. The bilateral basal infiltration is typical of the most common pattern seen in kerosene pneumonitis. [All illustrations after Bonte, F. J., and Reynolds, J.: Hydrocarbon Pneumonitis, Radiology 71:391-397 (Sept.) 1958.]

Characteristically, roentgenographic evidence of resolution of infiltration lagged well behind clinical improvement. Persistence of pulmonary opacities was not unusual on films taken 10 or 12 days after the initial examination. In some cases rapid resolution was noted. Roentgen manifestations of complications were rare. Three patients had transient segmental atelectasis. None in this series developed pleural fluid.

EXPERIMENTAL STUDIES

In several patients the interval between the ingestion of kerosene and radiography of the chest was reliably documented and found to be less than 1 hour. There were 15 patients in this group, and all showed evidence of pneumonia. In 1 instance, the time interval was stated to be a maximum of 20 minutes. Infiltration, sometimes major in degree, was a common finding. The speed with which the pneumonia becomes radiographically manifest, often before clinical signs of pneumonia are present, has impressed others.[7] It prompted us to determine experimentally the minimal interval at which an infiltrate could be detected, and to depict the rate of development of pneumonic consolidation following the deposition of kerosene in the lung of an experimental animal.

The apparatus employed is constructed according to the Ramsey principle and permits cinefluorographic exposures at the rate of 3¾ to 30 frames per second.[2] By obtaining a number of frames at arbitrary intervals after the administration of kerosene, it was hoped that time-lapse roentgen movies could be made. In this experiment dogs weighing 20 kg. were employed. Tracheostomy was performed under nembutal anesthesia, and number 15 woven ureteral catheters were passed into the right and left mainstem bronchi under fluoroscopic control.

Figure 4 shows selected frames from a time-lapse cineroentgenogram made after the instillation of 15

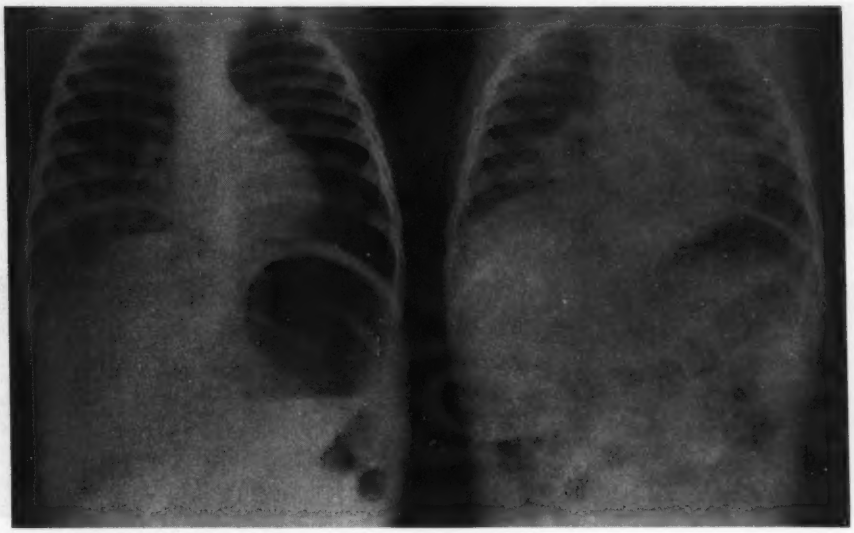

Fig. 2. Twenty-two month old Negro girl. Film on the left taken approximately 90 minutes after ingestion of an unknown quantity of kerosene. The unilateral, right-sided basal infiltrate is a pattern often encountered. The film on the right was taken 12 days later and shows persistent infiltrate.

cc. of kerosene through the catheter into the right lung. A measure of density control was attempted by instilling an equal amount of normal saline through the catheter into the left lung. It will be noted that a definitely visible infiltrate is present at 15 to 20 minutes and that the process grows steadily in size until the death of the animal at 3 hours. The same figure shows another experiment of this same nature, with a different placement of the catheter on the right. Again, the early appearance of the infiltration is apparent and its progressive enlargement with the passage of time is noted. Properly edited, the films from which the pictured strips are taken form a smoothly continuous picture of the development and growth of the infiltrative lesion.

SUMMARY AND CONCLUSIONS

Intoxication from the ingestion of kerosene is a leading cause of accidental poisoning in the younger age group. It is particularly frequent in the South.

Of major importance in the syndrome produced is the chemical pneumonitis which is present in the vast majority and which largely determines the severity of the clinical course. This pneumonia probably is produced by kerosene aspirated during the act of initial ingestion.

The greater reliability of the chest roentgenogram over physical examination in the detection of pneumonia in this disease is seen clearly. This fact should be exploited and radiographs obtained in all cases.

The distribution and appearance of the infiltration on chest films is, in general, characteristic and readily recognizable. The dominant picture is a bilateral basal infiltration typical of an aspiration pneumonia. A variation was encountered which resembled pulmonary edema, and it is suggested that this is a manifestation of perivascular fluid extravasation due to the action of blood-borne kerosene.

The rapidity of the development of pulmonary infiltration is seen in the clinical material. Kerosene

Fig. 3. The bilateral, symmetrical perihilar infiltrates resemble the picture seen in pulmonary edema. This "edema" type pattern is not commonly seen. It may be an expression of interstitial pneumonia caused by blood-borne kerosene.

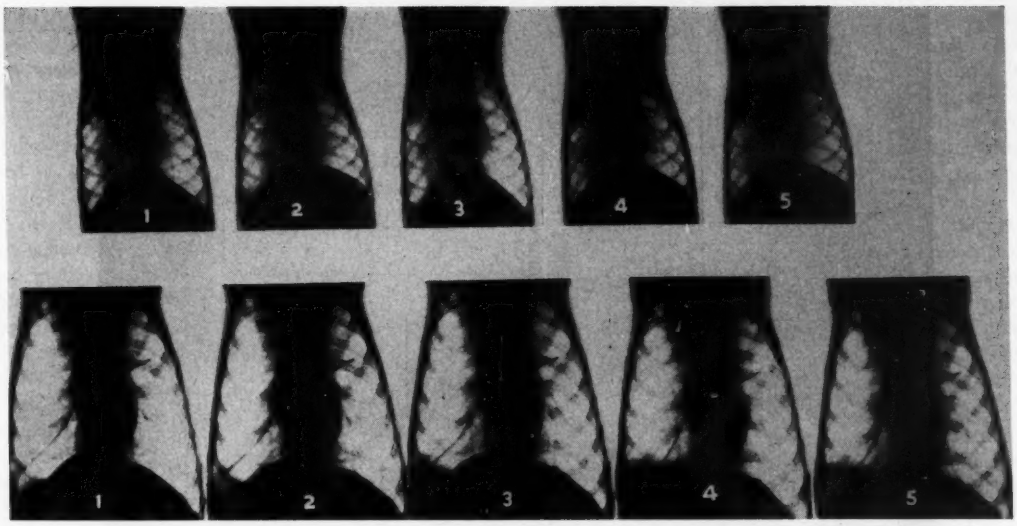

Fig. 4. Representative frames from time-lapse cineroentgenograms of dog's lung after the instillation of kerosene through a catheter into selected lobes. In the upper row, 12 cc. were placed in the right upper lobe. Frame 1 shows the density in this region immediately after the deposition of kerosene. Frame 2, made 15 minutes later, shows early development of infiltrate. Frame 3, at 50 minutes, shows well developed consolidation. The frames in the bottom row show a similar sequence after kerosene was instilled in the right lower lobe. Frame 2 was taken at 20 minutes, and beginning infiltration is apparent. Frame 5, taken at 2 hours, shows further progression.

pneumonitis was produced in dogs as early as 15 minutes after the instillation of the toxic substance and depicted by means of time-lapse cinefluorography.

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Organization of a Hospital Staphylococcal Control Program

A hospital infection committee representing major departments of the hospital should be responsible for surveillance, control, and education, but all hospital personnel must cooperate fully to make effective any staphylococcal control program. With such cooperation, common sense, and a few regulations, an adequate control program can be instituted.

Fred J. Wolma, Jr., M.D. and
Edward B. Rowe, M.D.

Galveston, Texas

THE RECOGNITION of the necessity for controlling staphylococcal disease is a prerequisite for the organization of a satisfactory and practical control program. Often one hears such comments as "we have always had staphylococcal disease and we always will—why has the problem become so urgent all of a sudden?" or "the survival of the fittest is the philosophy to accept—those who survive will develop their own immunity." If such philosophies and attitudes prevail in our thinking, any attempt to control staphylococcal disease will certainly fail.

Admittedly, we are confronted with an age old disease, because staphylococcal disease is as old as medicine and surgery. However, two new developments in this disease must be recognized, for they change the entire complexion of the disease. The new developments are (1) the emergence of antibiotic resistant strains of Staphylococcus and (2) the emergence of strains with epidemic potential. With these two new developments, staphylococcal disease has become a serious hospital problem.

An adequate hospital control program must provide for (1) the protection of susceptible patients, such as newborn infants and elderly debilitated patients, from staphylococcal disease; (2) the isolation of patients with staphylococcal disease from the general hospital population; (3) the control of carriers among hospital personnel including doctors, nurses, aides, orderlies, technicians, and dietitians; (4) the energetic treatment of patients with staphylococcal disease; and (5) the protection of the hospital from outside infections brought in by the new patients and the visitors.

The purpose of this paper is to present the staphylococcal control program instituted at the University of Texas Medical Branch, Galveston.

ORGANIZATION

A sound approach to the recognition, prevention, and control of hospital acquired staphylococcal disease begins with the establishment of a hospital infection committee. The American Hospital Association and the Joint Commission on the Accreditation of Hospitals recommend such a committee. The committee should have specified responsibilities and methods of operation. Of paramount importance is that the committee have authority to enforce its recommendations. There must be 100 per cent cooperation among the committee, the professional staff, and the administration. Without this 100 per cent cooperation a satisfactory control program is unrealistic and is doomed to failure from its inception.

The hospital infection committee is made up of representatives from (1) administration; (2) clinical departments—medicine, surgery, gynecology and obstetrics, and pediatrics; (3) nursing service; (4) laboratory service—bacteriology; (5) pharmacy; and (6) housekeeping. The chairman of the committee is one interested in infectious diseases and therefore, possesses knowledge in this field of medicine. The bacteriologist assumes a key position on the committee since most of the information concerning staphylococcal infections is channeled through the

bacteriology laboratory. A trained epidemiologist with a background in public health and preventive medicine is recommended to serve as hospital epidemiologist in larger hospitals. In smaller hospitals a trained bacteriologist, or clinician with special interest in bacteriology and infectious diseases, could serve in this capacity. The local health officer, when available, should be invited to serve as a consultant to the committee.

The hospital infection committee should be assigned specific responsibilities. These responsibilities can be grouped under the headings of surveillance, control, and education.

Surveillance.—The committee should collect complete data on all infections acquired by patients within the hospital and those occurring among recently discharged patients. Regular and frequent meetings, probably at least twice monthly, are necessary. When a problem arises concerning infections, the data are compiled and presented to the medical staff and administration, along with recommendations for the solution of the particular problem. In this way, "hot-spots" of infection in the hospital can be detected early and dealt with rapidly, thus preventing the development of an epidemic.

Dr. Fred J. Wolma, Jr., assistant professor of surgery at the University of Texas Medical Branch, and his co-author presented this paper for the Section on Public Health at the Texas Medical Association annual session April 21, 1959, in San Antonio.

Control.—The committee must evaluate all phases of hospital operations pertaining to the control of infections, recommending changes, establishing appropriate patterns of antibiotic usage, and instituting epidemic control measures. At the Medical Branch, this phase of control is carried out by the infectious disease control service. The director and assistant director receive bacteriological reports on all cultures which prove to be staphylococci. The antibiotic resistant infections are investigated.

Certain new antibiotics proven to be effective against antibiotic resistant organisms are recommended to be placed on a restricted use basis. Our restricted list includes at the present time Kanamycin, Rhistocetin, and Vancomycin. These drugs are not available for routine use. They are obtained from the pharmacy by prescription. The pharmacy sends weekly reports of all of the prescriptions received for these three restricted antibiotics to the chairman of the hospital infection committee and the hospital administrator. The purpose is to keep in reserve several drugs known to be effective against antibiotic resistant staphylococci in case an emergency situation arises. The restricted list is expected to change from time to time as newer antibiotics are produced.

Education.—The committee should plan an educational program for all hospital personnel. By presenting current concepts in prevention and control of staphylococcal disease to the personnel, they become interested and feel they are taking an active part in the control program. Proper education makes for a better understanding of the over-all problem. The methods used in the educational program include movies, lectures, and practical demonstrations.

INFECTIOUS DISEASE CONTROL SERVICE

The infectious disease control service (IDCS) at the Medical Branch Hospital has at its head a director and an assistant director. These two individuals are clinicians with a special interest in the staphylococcal problem. These officers investigate all infections which are reported to the IDCS. All staphylococcal disease occurring in the hospital is automatically reported to the IDCS since the IDCS receives from the bacteriology laboratory a report of all positive staphylococcal cultures. Investigation of the infection includes a determination as to whether the infection was present on admission of the patient or acquired in the hospital. Recommendations concerning isolation are made. When isolation of an infection is recommended, the action is taken by the attending physician. The control service does not take over the management of the case; however, the control officers are available for consultation at all times. The investigation of the infection also includes a review of the antibiotics used in the treatment. If a change in antibiotic treatment is thought to be justified, recommendations are made to the attending physician. If antibiotics which are on the reserve list are being employed, a thorough review is carried out. If other antibiotics are shown by sensitivity tests to be just as effective, a change of antibiotic is recommended. No treatment is changed by the control officer. Changes in therapy are made by the attending physician only, and in this way, regimentation is prevented.

The infectious disease control service performs several duties, among which are (1) operation of an outpatient clinic where all personnel having infectious lesions are treated and where all nasal carriers are treated; (2) operation of an isolation ward, where all patients with infectious diseases are isolated; and (3) serving as custodian of all the clinical records of patients, personnel, and carriers with staphylococcal disease.

Outpatient Clinic.—The outpatient clinic consists of a waiting room and a treatment room where all ambulatory personnel with infected lesions and all nasal carriers are seen. Since this clinic is considered an isolation area, it is used for the treatment of no other types of patients. Strict aseptic technique is used during all examinations and treatment. Cultures, sensitivity patterns, and phage typing are obtained from all open discharging lesions. Ambulatory personnel treated in this clinic include all members of the professional staff and house staff, nurses, medical students, dietitians, aids, orderlies, and so forth—in other words, anyone working at the University of Texas Medical Branch who develops a suppurating lesion. Personnel with active draining lesions are relieved of duty and treated until the lesion is healed, at which time they are allowed to return to work. Nasal carriers are treated, but are not relieved of duty. The treatment of these individuals is carried out by a member of the IDCS personally.

Isolation Ward.—For hospital patients with active lesions, an isolation ward was established. Admission of the patients to this area is only upon recommendation of one of the control officers. When isolation of an infection is recommended by the control officer following an investigation of the case, transfer of the patient to this area is done immediately. The patient remains in isolation until approval for removal is obtained from one of the control officers, or the patient is discharged. Visiting hours and visitor privileges are restricted in this area. The visitors are allowed one at a time and are given instructions in isolation technique prior to admission to the patient's room. Strict isolation technique is followed in all phases of management and treatment.

Record Custodian.—The records of all patients and personnel with infections are kept by the IDCS. A report of all new infections among personnel and patients is sent to the hospital administrator weekly.

RESULTS

The outbreak of staphylococcal disease was first noticed in the newborn nursery about 2 years ago. The Department of Pediatrics initiated a control program in the nursery to combat this outbreak. Routine nasal cultures of all personnel and newborn infants were done. All positive nasal carriers were treated vigorously. Periodic surveys of carriers were done. In addition, good hygienic measures and isolation techniques were employed in the nursery. Within 1 month following the initiation of the program, the positive cultures among newborn infants practically disappeared. The other manifestations of staphylococcal disease in the newborns, such as furunculosis, breast abscess, and pneumonia, also disappeared. The program continued, and to date no serious outbreaks of staphylococcal disease have occurred in the nursery.

The infectious disease control service was instituted about March 1, 1958. This was an outgrowth from the control program set up in the nursery with the same staff personnel organizing the control service for the entire hospital. With the isolation of all patients with antibiotic resistant staphylococcal disease in the special unit, the incidence of hospital acquired staphylococcal infections dropped sharply (fig. 1). Furthermore, the number of deaths that were directly or indirectly attributable to staphylococcal disease dropped abruptly.

The number of personnel who developed staphylococcal disease, namely, furuncles, has decreased markedly (fig 2) since the program was put into

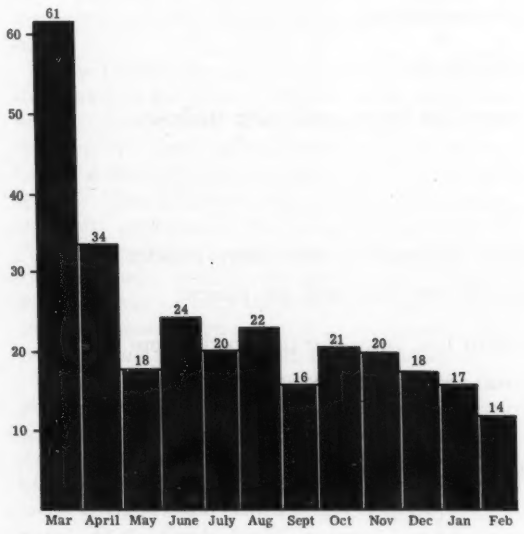


Fig. 1. Hospital acquired Staphylococcus 80/81 lesions (March, 1958-February, 1959).

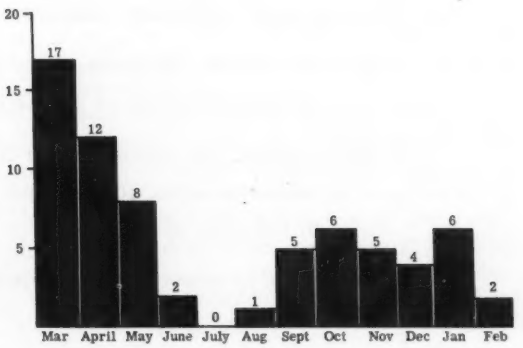


Fig. 2. Personnel with Staphylococcus 80/81 lesions (March, 1958-February, 1959).

effect. Also the number of nasal carriers among hospital personnel showed a significant decrease (table 1). The number of recurrent and persistent carriers remains low. Approximately 85 per cent of the recurrent persistent carriers have been made negative by vigorous treatment and close follow-up.

TABLE 1.—*Results of Treatment of Personnel with Positive Nasal Cultures.*

Seventh Floor Personnel (Medicine, Surgery, Gynecology Wards)	
April 21, 1958	25 positive
July 16, 1958	5 positive

Bacitracin-Neomycin-Polymixin ointment employed.

CONCLUSIONS

The staphylococcal control program as instituted at the University of Texas Medical Branch, Galveston, has been outlined. The results produced by this program have been very gratifying. True, the staphylococcal problem cannot be eradicated; however, with common sense, a few regulations, and the cooperation of 100 per cent of the hospital staff and personnel, a control program which is adequate and effective can be instituted in any hospital. With the staphylococcal problem being what it is today, it behooves all hospitals in the best interests of the patients to set up a control program.

Drs. Wolma and Rowe, University of Texas Medical Branch, Galveston.

Declaration of Geneva

Adopted by the World Medical Association in September, 1948

I solemnly pledge myself to consecrate my life to the service of humanity.

I will give to my teachers the respect and gratitude which is their due.

I will practice my profession with conscience and dignity.

The health of my patient will be my first consideration.

I will respect the secrets which are confided in me.

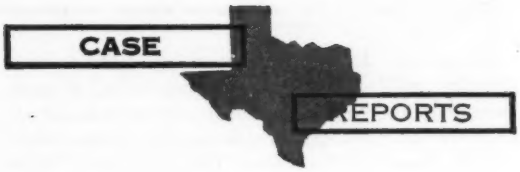
I will maintain by all the means in my power, the honor and noble traditions of the medical profession.

My colleagues will be my brothers.

I will not permit considerations of religion, nationality, race, party politics or social standing to intervene between my duty and my patient.

I will maintain the utmost respect for human life, from the time of conception; even under threat, I will not use my medical knowledge contrary to the laws of humanity.

I make these promises solemnly, freely and upon my honor.



Psychological Aspects . . .

Treatment of Vocal Nodule Cases

Ben T. Withers, M.D., F.A.C.S. and
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Psychosomatic factors in addition to vocal abuse, allergy, and/or endocrine imbalance are prominent among the causes of vocal nodules. Surgical removal in irreversible nodules is the first treatment step required; smaller nodules may regress with nonsurgical therapy. In all cases, proper voice use and healthy psychological outlook must be taught.

MISUSE OR OVERUSE of the voice plus allergy or endocrine imbalance figures in the etiology of vocal nodules. We have observed another common factor, the psychosomatic. Experience has taught that after careful medical history and diagnostic procedures in relation to the physical study, the laryngologist needs to look closely at the patient and his family.

An important requisite to this careful scrutiny is the provision for time to observe while the patient unfolds the problem. The laryngologist, therefore, requires the allied medical services of those who have the training and can devote the time to carry out this schedule: develop a counseling relationship; study the patient's life and social-psychological adjustment, through the case study or counseling interview approach; evaluate the relationship of psychological factors to voice disorder; give voice analysis and voice therapy; give counseling of a psychotherapeutic nature for the patient and his family.

Vocal nodules, therefore, become an interdisciplinary treatment problem with paramedical staff required. The speech therapist who has training and experience in the areas of voice science, techniques of interviewing, and psychological counseling can work in cooperation with the laryngologist, the patient, and the family for the best total management of vocal nodules. The need for a total care program for voice cases has been pointed out by Brodnitz,[3] Zerffi,[20] Moore,[10] and the other specialists in the fields of laryngology and speech pathology.

We are of the opinion that vocal nodules eventually become irreversible. Certain nodules must be removed surgically; smaller ones will regress with proper nonsurgical therapy. In all cases, however, proper voice use and a healthy psychological outlook must be instilled to prevent recurrences. In discussion of the three phases of total treatment, Lowenthal[9] stated: "The post-surgical phase also includes the removal of factors which predisposed to the lesion initially." Moses[12] discussed voice vulnerability in relation to any condition which disturbs the emotional life. He stated: "Neuroses and psychoses will be in the scope of laryngological considerations, as well as the artistic problems which have to do with emotional expression."

In voice therapy and psychological management, these general procedures were followed by the voice therapist. A diagnostic interview was made to include: case history study of the patient and his family; investigation of long-term history of voice habits; determination of significance of the problem to the patient in terms of a disrupted life pattern; vocational and social adjustment, and psychological reactions and coping mechanisms; and an evaluation of intellectual capacity and motivation. Voice analysis at this time of referral determined pitch defects, intensity or loudness defects, quality and resonance

defects, rate defects, and breathing defects. Voice therapy, relaxation training, and psychological counseling for the patient and his family were instituted.

Time permits detailed discussion of only 4 illustrative cases from our series. These concern 2 adults and 2 preschool children. Three relatively large nodules were treated by surgical removal followed by voice therapy, psychotherapeutic counseling for the patient, and guidance for the family members. The fourth, a smaller nodule, was handled by voice therapy and psychological management in lieu of surgery. These patients illustrated the application of Selye's[17] stress concept applied to mucosal disease, as discussed by Currier.[5] The discovery of stressors and the evaluation of stress-producing situations has led to a unified theory of disease and a unified concept of therapy.

CASE REPORTS

CASE 1.—Mrs. A. R., a white woman, aged 44 years, reported April 30, 1954, with a history of "hoarseness all the time." Employed as a saleslady, she used the voice a great deal and suffered from hay fever each fall. A chronic skin condition had been diagnosed as psoriasis, and slight degree of conductive hearing loss in the left ear as otosclerosis. Mirror laryngoscopy confirmed by the direct approach at surgery revealed a vocal nodule approximately 5 mm. in diameter on the right vocal cord at the junction of the anterior and middle thirds. The left vocal cord was edematous. The nodule was removed and diagnosis confirmed pathologically. A good voice resulted postoperatively and has been maintained during the 4 year follow-up. Discussion of her speech therapy will follow.

The patient reflected long-term vocal abuse, generalized tensions, and poor life adjustment. As a child, she had lived with a deaf grandmother; communication required a loud voice with overprojection. From the time of adolescent change, she had a very husky voice quality. The patient exhibited lower than usual female pitch, shallow arrhythmic breathing pattern, and staccato, jolting speech rhythm with a rough quality. The patient was a very tense person, a perfectionist, and a worrier. Feelings of resentment and aggression toward her mother-in-law and sister-in-law had been repressed for many years. She also expressed feelings common to many women approaching middle age who are no longer needed for the daily physical care and nurture of their grown children.

Mrs. A. R. was able to achieve proper voice production through a combination of counseling and the voice training outlined by Moore.[11] Therapy emphasized counseling and psychotherapy, voice consideration, and instruction in relaxation techniques using Jacobson's[8] theory. Voice therapy was directed toward relaxed voice production with smooth, rather aspirate initiation of tone, a change in voice placement with slightly higher pitch, minimal volume, and proper breathing habits.

This intelligent and well-motivated woman was able to accept personal responsibility in the rehabilitation program and profited by mirror practice speech. Later in therapy, after the patient had verbalized her hostile, jealous feelings, a more direct approach was taken. This question was posed: "You have told me what a fine husband you have and how considerate he is of you as well as of his mother and sister. What do you consider they take away from you?" Mrs. A. R. sat thoughtfully for several seconds before replying: "You know, I had never thought about it that way. Come to think of it, nothing; it really takes nothing away from me, I guess." During the last few counseling periods, Mrs. A. R. explored the possible feelings and needs of her husband's mother and sister. She reflected a growing insight into others' problems and objectivity toward her own emotional problems. It was considered important for this patient of the Jewish faith to verbalize, recognize, accept, and cope realistically with her hostility in order to relieve her anxiety and guilt feelings. The strong family loyalties and mores of her social group required that she accept and conform to these standards in order to achieve feelings of personal worth and happiness.

CASE 2.—M. R. D., a white girl, aged 4 years, reported July 21, 1954, with a history of hoarseness for 3 months. The patient was a thumb sucker. An identical twin sister was not bothered with hoarseness. Direct laryngoscopy revealed a 3 mm. vocal nodule on the right vocal cord at the junction of the anterior and middle thirds. The left vocal cord was thickened. The nodule was scalped off and the diagnosis confirmed by the pathologist. Normal voice followed speech therapy. The voice was hoarse at first following surgery. The pattern of hyperfunction with extreme tension of all the throat and speech mechanism was similar to that described by Froeschels[6] as self-strangulation. The lowered pitch, great intensity, and glottal stroke caused constant abuse to the striking edges of the vocal bands. Berry and Eisenson[2] referred to "a type of explosive speech in which there is far too much intensity and breath pressure, a narrow pitch range and a stress pattern in which accentuation occurs too frequently." This described the voice of M.R.D. General bodily tension, aggressiveness, and hyperactivity accompanied the specialized tension.

Psychometric evaluation of the child demonstrated average learning ability. Puzzle type tests were difficult for her; she was slow in seeing the visual relationships. Patterning and memory of patterns was also slightly deficient. As there was great sibling rivalry in spite of an interdependent relationship between the twins, part of the therapy period was spent with both children. M.R.D. was aggressive, tomboyish, and domineering. Her identical twin loved to dress up in "lady" clothes in the normal play pattern of a 4 year old girl. Pressure to conform brought forth resentment from the aggressive twin and wheedling or whining from the recessive twin. An ego-building type of encouragement, with clear delineation of the behavioral limits and expectations was successful with both twins. After rapport was gained, the first attempts at voice conservation were directed toward teaching M.R.D. to talk instead of shout. The pitch was raised slightly and she was taught a light, slightly breathy initiation of voice to avoid the hard, glottal stroke.

The two elder brothers and father were also included in the plan. The boys were encouraged to stop the rough, overstimulating play with their sister and were taught to understand her need for more normally feminine activities. The father was encouraged to be more consistent in disciplinary measures and to emphasize approval and reward versus punishment. There was considerable disparity of interest and philosophy between the parents due to differing religious backgrounds, nationality, socio-economic mores, and personalities. M.R.D. thus lived in an "internal environment of excessive tension," which Berry and Eisenson[2] stated often accompanies this explosive speech.

The parents were counseled to find positive means for the child to show her abilities and gain a sense of self-

worth. They were encouraged to allow more freedom in expressing aggressive feelings without fear of punishment and loss of approval. Long-term follow-up observation (4½ years) has disclosed improved adjustment.

CASE 3.—Mrs. G.E.N., a white woman, aged 31 years, was seen July 16, 1954, with a history of hoarseness and "fatigue in the throat" for 2 months' duration. Postnasal drip was also a symptom since the patient was subject to nasal allergy. (Later hyposensitization shots were required.) The patient talked more than average and used to sing in church. Mirror examination of the larynx confirmed by direct laryngoscopy at surgery revealed a vocal nodule of the left vocal cord. The nodule was approximately 4 mm. in diameter and was removed with the cup biopsy forceps. Microscopic section was diagnosed "vocal cord nodule (singer's node)." The patient demonstrated little evidence of vocal abuse except for the use of a slightly low and narrow pitch range. Her monotonous and inflexible voice and measured rhythm of speech gave the impression of repressed emotions and great conscious control of speech. Brodnitz[4] referred to "people who try so hard to relax that they become tense all over." This patient's exaggerated efforts to relax appeared to result in generalized tension and hyperfunction of the vocal mechanisms.

She was a native of Holland who came to the United States as a bride following World War II. The American way of life presented strong contrasts to life in her homeland. She had adjusted to changed religion, nationality, and language. She had worked very hard to learn all that was required to run an American household, dress properly, converse well, and entertain graciously according to upper socio-economic class standards.

The patient and her husband wished to have a large family. Their third child, born handicapped, died shortly after birth. This and the anxiety about her own foreign accent were considered precipitating factors. Mrs. G.E.N. became hoarse shortly after the infant died. Hypothyroidism and nasal allergy were no doubt additional stressors in relation to her tension and voice problem. However, the long-term life stress situation and the tremendous emotional and physical drive she had exerted in her motivation to change herself and adjust to the heavy demands of her new environment appeared to be of primary etiologic importance. Although she had conquered many of her earlier fears and anxieties, the effort had taken a psychological toll which apparently predisposed this patient to tension and vocal nodules.

After she had verbalized her background in counseling sessions, her attention was directed toward recognition that her personal assets outweighed her liabilities. To strengthen her growing feelings of self-worth, further ego enhancement was gained through counsel with her husband. He was helped to understand the magnitude of the personal and social problems she met and overcame and the need for reinforcement of her feelings of accomplishment. As her husband was able to view it this way, Mrs. G.E.N. accepted her speech as a part of her background and personality and felt no further need to change nor to exert the rigid monitoring of her speech and diction.

Very little attention was directed to voice therapy for this patient. Voice correction came chiefly through psychotherapeutic counseling. Mrs. G.E.N. had a thyroidectomy performed for removal of a benign tumor sometime after the vocal nodule surgery. Recovery was uneventful with no evidence of further voice difficulty in a 3 year follow-up period.

CASE 4.—Another child, J.M., a white boy, aged 5 years, was seen August 9, 1957, with a history of chronic hoarseness in spite of tonsillo-adenoidectomy and weekly allergy shots for a long period of time. Mirror examination revealed a 2 mm. nodule at the junction of the anterior and middle thirds of the right vocal cord. In view of the small sized nodule and the unusually good cooperation, a try at speech therapy in lieu of surgery was advised and instituted. Reexamination of the larynx after 6 weeks of therapy showed normal vocal cords with no nodule. A normal voice resulted. The patient had his first evidence of hoarseness at 2½ years of age and periodically recurring nodules from the age of 3. Articulation, vocabulary, and the use of connected language were all accelerated.

At 5 years of age this child's allergic and respiratory infections had resulted in his isolation from the other children in a sterile, overprotected environment. He presented a picture of maladaptive behavior, characteristic of the spoiled, frustrated, chronically ill child. He was a tyrant at home and bullied his father, mother, sister, and a succession of maids into submission. They "gave in to keep him from getting ill with asthma from the screaming," his mother reported. Perkins[14] referred to a tense mother and a tense baby in terms of vocalization of the child. J.M.'s mother reported an emotional problem which required psychiatric care for herself during this child's infancy.

J.M.'s voice was produced with high, strident pitch, excess volume, frenzied rate, and arrhythmic breathing. He shouted and screamed or whined and cried continually with extreme tension in the tongue, jaw, and larynx and with his neck "cords" taut and distended.

Psychometric study showed him to be a precocious child who lacked socialization. The pediatrician removed the ban on attending nursery school which had been imposed because of the child's susceptibility to infections and allergy to the medications commonly used for treatment. Neither surgical nor nonsurgical therapy for this child's voice problem would be of any benefit unless the underlying psychological problems could be resolved and the child given a normal existence. The child was placed in a carefully selected kindergarten in which the groups were kept small and careful health screening of the children was done daily.

Dr. Ben T. Withers, associate clinical professor of otolaryngology at Baylor University College of Medicine, and his co-author, who is speech therapist at the Houston Speech and Hearing Center, presented this paper for the Section on Eye, Ear, Nose, and Throat at the Texas Medical Association annual session. April 20, 1959, in San Antonio.

Voice therapy stressed conservation, relaxed initiation of voice with proper pitch, and minimal volume. Breathing exercises and relaxation work were done with this child. The chief focus of therapy was behavioral training in following directions, sharing, taking turns, and learning the rules of fair play. Games, stories, drawing, and reading readiness activities were adapted to serve voice reeducation and behavioral training goals. During this time, he was expected to play according to the rules established. He employed every ruse to avoid discipline. At first, when attempts to cheat had failed, he often said, "O.K., then I can yell when I want to, can't I?" When he found that only social behavior was rewarded, he began to seek approval by conforming. His keen sense of humor and love of jokes was utilized to motivate and hold his interest in the voice-hygiene program. Only twice after the first 2 weeks of therapy did he revert to completely negative behavior. Both

instances were followed by an allergy attack on the next day.

The patient remained in the same private school through the first grade in an accelerated class of children with superior mentality. The small group and the challenge of interesting activities offered by this enriched curriculum were considered important for this child during his first school experience. Home visits were made to reinforce the principles being taught and to evaluate the home training program. After the psychological problems were resolved, there was appreciable and rapid decrease of all allergic and asthmatic reactions. The boy's physical health appeared to improve greatly as well as, or possibly because of, the improved psychological adjustment. The relationship of health factors and psychological factors for this child suggested psychosomatic basis for much of his health history. It appears wise to point out, however, in agreement with Jackson and Jackson,[7] that there is danger in separating voice disorders into purely functional or organic categories. In addition to the health problems, the stress factors of social isolation in respect to his peers, extreme overprotection, and the lack of parental discipline had all combined to create confusion and maladaptive behavior in this child. By changing the environment and the child's responses, voice correction was possible with nonsurgical therapy.

SUMMARY

The 4 cases presented have demonstrated various psychological aspects of treatment of vocal nodules. Although organic factors must be investigated, functional factors related to vocal abuse have come to be considered important in the origin of vocal nodules. Their treatment is no longer a purely surgical problem. The laryngologist and voice pathologist should provide the patient with a treatment schedule through interdisciplinary management.

The treatment philosophy delineated herein places emphasis upon resolving the psychosomatic factors, but includes these chief factors: medical and/or surgical care of all physical abnormalities; general relaxation training; direct voice therapy when it was indicated; psychological adjustment of the patient; family counseling; and follow-up care.

The therapy described has demonstrated good prognosis for lasting cure of vocal nodules and continuing psychological adjustment of the patients presented.

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ABSTRACT OF DISCUSSION

DR. CLAUDE D. WINBORN, Dallas: Every otolaryngologist who accepts laryngeal problems is faced not only with evaluating the laryngeal disease, but also with tying it in with the history of how the disease came about.

There are certain groups in which the pathologic condition is caused by vocal abuse without any demonstrable psychogenic overlay. Among these groups could be listed:

1. Those who overuse and misuse the voice during acute inflammations of the vocal cords.

2. Such people as cheer leaders and carnival hawkers who overuse and misuse the voice at a vocal pitch for which the larynx was not designed.

3. Those patients in whom the vocal cord is physically changed by allergic sensitivity, excessive smoking, drinking, and possibly hyperthyroidism.

These we can help either by changing their vocation or surgically removing the results of vocal abuse. Excessive smoking infrequently produces vocal nodules but more often produces hyperkeratosis of the whole vocal cord.

The essayists are speaking of the group who need, in addition to what the otolaryngologist can do for them, speech therapy and in some cases psychotherapy as well. Among these might also be mentioned:

1. The budding singers and the singers who change their vocal habits by reason of temporary laryngitis and fail to readjust to correct singing technique.

2. School teachers and preachers who depend on their voice for their livelihood.

3. The smallest boy on the block who wants to sound like a man.

4. The girls who raise their voices coquettishly.

5. The busy housewife who is constantly talking, or screaming at her children, and under emotional tension.

These latter groups we cannot expect to help permanently with surgery, and unless we are especially trained in speech therapy we should refer them to someone who is.

★ Coming Meetings

Texas Medical Association, Fort Worth, April 9-12, 1960 (Executive Board, Jan. 17, 1960). Dr. F. W. Yeager, Corpus Christi, Pres.; Mr. C. Lincoln Williston, 1801 North Lamar Blvd., Austin, Exec. Secy.

American Medical Association, Dallas (Clinical Session), Dec. 1-4, 1959. Dr. Louis M. Orr, Orlando, Fla., Pres.; Dr. F. J. L. Blasingame, 535 North Dearborn, Chicago 10, Exec. Vice-Pres.

Current Meetings

JANUARY

American Academy of Allergy, Hollywood-by-the-Sea, Fla., Jan. 11-13, 1960. Dr. Francis C. Lowell, Boston, Pres.; Dr. Joseph Noah, 100 N. Euclid Ave., St. Louis 8, Mo., Secy.

Texas Radiological Society, Houston, January 22-24, 1960. Dr. Herman C. Sehested, Fort Worth, Pres.; Dr. R. P. O'Bannon, 1216 Pennsylvania, Fort Worth, Secy.

Texas Urological Society, Waco, January 23-24, 1960. Dr. William Heck, San Antonio, Pres.; Dr. Moreton A. Magid, 1525 Colcord Ave., Waco, Secy.

Twelfth District Society, Marlin, January 12, 1960. Dr. Paul H. Mitchell, Corsicana, Pres.; Dr. J. M. Brown, Torbett Clinic, Marlin, Secy.

International Medical Assembly of Southwest Texas, San Antonio, Jan. 25-27, 1960. Dr. Alvin O. Severance, San Antonio, Pres.; S. E. Cockrell, 202 W. French Place, San Antonio, Exec. Secy.

FEBRUARY

American College of Allergists, Miami Beach, Feb. 28-March 4, 1960. Dr. Cecil M. Kohn, Kansas City, Pres.; Mr. Eloi Bauers, 2160 Rand Tower, Minneapolis, Executive Vice-Pres.

American College of Radiology, New Orleans, Feb. 3-6, 1960. Dr. Lawrence Reynolds, 10 Peterboro, Detroit, Pres.; Mr. W. C. Stronach, 20 N. Wacker Dr., Chicago 6, Executive Director.

Texas Association for Mental Health, Austin, Feb. 18-20, 1960. Paul Southern, Ph.D., Abilene, Pres.; Mr. John Lane, 2410 San Antonio, Austin, Executive Director.

Texas Association of Obstetricians and Gynecologists, Austin, Feb. 12-13, 1960. Dr. Maurice Meynier, Houston, Pres.; Dr. Hugh W. Savage, 815 Fifth Ave., Fort Worth, Secy.

Texas Proctologic Society, Dallas, February, 1960. Dr. Alvin Baldwin, Dallas, Pres.; Dr. H. Gray Carter, 915 St. Joseph St., Dallas, Secy.

Texas Public Health Association, Galveston, Feb. 22-24, 1960. Mr. Tom Warren, Austin, Pres.; Mr. Joseph N. Murphy, Jr., Box 4012, Austin 51, Executive Secy.

First District Society, Pecos, Feb. 5, 1960. Dr. H. D. Garrett, El Paso, Pres.; Dr. E. S. Crossett, 1501 Arizona St., El Paso, Secy.

National and Regional

American Academy of Dermatology and Syphilology, Chicago, Dec. 3-8, 1960. Dr. Francis W. Lynch, St. Paul, Minn., Pres.; Dr. Robert R. Kierland, Mayo Clinic, Rochester, Minn., Secy.

American Academy of General Practice, Philadelphia, March 19-24, 1960. Dr. Fount Richardson, Fayetteville, Ark., Pres.; Mr. Mac F. Cahal, Volker Blvd. at Brookside, Kansas City 12, Executive Secy.

American Academy of Ophthalmology and Otolaryngology. Dr. John H. Dunnington, New York, Pres.; Dr. W. L. Benedict, 15 Second St. S.W., Rochester, Minn., Secy.

American Academy of Pediatrics, Atlantic City, April 20-22, 1960. Dr. William W. Belford, San Diego, Calif., Pres.; Dr. E. H. Christopherson, 1801 Hinman Ave., Evanston, Ill., Executive Director.

American Association for Maternal and Infant Health. Dr. M. Edward Davis, Chicago, Pres.; Mrs. Patricia Dorr, 116 S. Michigan Ave., Chicago 3, Executive Director.

American Association for Thoracic Surgery, Miami Beach, May 11-13, 1960. Dr. William E. Adams, Chicago, Pres.; Dr. Hiram T. Langston, 7730 Corondelet Ave., St. Louis 5, Secy.

American Association of Genito-Urinary Surgeons, Dearborn, Mich., May 11-13, 1960. Dr. Reed M. Nesbitt, Ann Arbor, Mich., Pres.; Dr. W. J. Engel, 2020 E. 93rd St., Cleveland 6, Secy.

American Association of Obstetricians and Gynecologists, Hot Springs, Va., Sept. 8-10, 1960. Dr. Robert A. Ross, Chapel Hill, N. C., Pres.; Dr. Clyde L. Randall, 216 Summer St., Buffalo 22, Secy.

American Association of Plastic Surgeons, Milwaukee, May 17-20, 1960. Dr. Lyndon A. Peer, New Jersey, Pres.; Dr. Thomas D. Cronin, 6615 Travis St., Houston 25, Secy.

American Cancer Society, New York, Oct. 26-27, 1960. Dr. Warren H. Cole, Chicago, Pres.; Mr. Granville Whittlesey, 521 West 57th St., New York 19, Secy.

American College of Chest Physicians, Miami Beach, Fla., June 8-12, 1960. Dr. Seymour M. Farber, San Francisco, Pres.; Mr. Murray Kornfeld, 112 E. Chestnut, Chicago 11, Executive Director.

American College of Gastroenterology, Philadelphia, Oct. 23-29, 1960. Dr. Joseph Shaiken, Milwaukee, Pres.; Mr. Daniel Weiss, 33 West 60th, New York 23, Executive Director.

American College of Obstetricians and Gynecologists, Cincinnati, April 3-6, 1960. Dr. John I. Brewer, Chicago, Pres.; Mr. Donald F. Richardson, P. O. Box 749, Chicago 90, Executive Secy.

American College of Physicians, San Francisco, April 4-8, 1960. Dr. Howard P. Lewis, Portland, Ore., Pres.; Mr. E. R. Loveland, 4200 Pine, Philadelphia 4, Secy.

American College of Surgeons. Dr. Owen H. Wangensteen, Minneapolis, Pres.; Dr. William E. Adams, 950 E. 59th St., Chicago, Secy.

American Congress of Physical Medicine and Rehabilitation, Washington, D.C., Aug. 21-26, 1960. Dr. F. J. Kottke, Minneapolis, Pres.; Dorothea C. Augustin, 30 N. Michigan Ave., Chicago 2, Executive Secy.

American Dermatological Association, Boca Raton, April 8-12, 1960. Dr. Marion B. Sulzberger, New York, Pres.; Dr. Wiley M. Sams, 308 Ingraham Bldg., Miami 32, Secy.

American Gastroenterological Association, New Orleans, March 31-April 2, 1960. Dr. H. Marvin Pollard, Ann Arbor, Pres.; Dr. Wade Volwiler, Secy., University of Washington School of Medicine, Seattle 5.

American Gynecological Society, Williamsburg, Va., May 30-June 1, 1960. Dr. Karl H. Martzloff, Portland, Pres.; Dr. A. A. Marchetti, 3800 Reservoir Rd. N.W., Washington 7, D. C., Secy.

American Heart Association, St. Louis, Oct. 21-25, 1961. Dr. A. Carlton Ernstene, Cleveland, Pres.; Mr. William F. McGlone, 44 E. 23rd, New York 10, Secy.

American Hospital Association, San Francisco, Aug. 29-Sept. 1, 1960. Dr. Russell A. Nelson, Baltimore, Md., Pres.; Dr. Edwin L. Crosby, 18 E. Division Street, Chicago, Executive Director.

American Laryngological, Rhinological, and Otological Society, Miami Beach, March 15-17, 1960. Dr. Theodore E. Walsh, St. Louis, Pres.; Dr. C. S. Nash, 708 Medical Arts Bldg., Rochester, N. Y., Secy.

American Neurological Association, Boston, June 13-15, 1959. Dr. Derek Denny-Brown, Boston, Pres.; Dr. Melvin D. Yahr, New York Neurological Institute, 710 W. 168th Street, New York 32, Secy.

American Ophthalmological Society, Colorado Springs, May 16-18, 1960. Dr. A. B. Reese, New York, Pres.; Dr. M. C. Wheeler, 30 W. 59th, New York 19, Secy.

American Orthopaedic Association, Hot Springs, Va., May 30-June 2, 1960. Dr. John Royal Moore, Philadelphia, Pres.; Dr. Lee Ramsay Straub, 535 East 70th St., New York 21, Secy.

American Pediatric Society, Swampscott, Mass., May 5-6, 1960. Dr. Samuel Z. Levine, New York, Pres.; Dr. A. C. McGuinness, Room 1036, 2800 Quebec St., N.W., Washington 8, D. C., Secy.

American Proctologic Society, Houston, April 25-27, 1960. Dr. H. R. Reichman, Salt Lake City, Pres.; Dr. Norman D. Nigro, 10 Peterboro, Detroit 1, Secy.

American Psychiatric Association, Atlantic City, N. J., May 9-13, 1960. Dr. William Malamud, New York, Pres.; Dr. C. H. Hardin Branch, 156 Westminister Ave., Salt Lake City, Secy.

American Public Health Association, San Francisco, Oct. 31-Nov. 4, 1960. Dr. Malcolm H. Merrill, Berkeley, Calif., Pres.; Dr. Berwyn F. Mattison, 1790 Broadway, New York 19, Executive Secy.

American Society of Anesthesiologists, New York, Oct. 2-7, 1960. Dr. J. Earl Remlinger, Jr., Wilmette, Ill., Pres.; Dr. Robert L. Patterson, 612 Bershire Drive, Pittsburgh 15, Secy.

American Society of Clinical Pathologists, Chicago, Sept. 24-Oct. 2, 1960. Dr. John J. Clemmer, Albany, Pres.; Mr. Claude E. Wells, 445 Lake Shore Drive, Chicago 11, Executive Secy.

American Surgical Association, White Sulphur Springs, W. Va., April 3-6, 1960. Dr. Warren H. Cole, Chicago, Pres.; Dr. William Altemeier, Cincinnati General Hospital, Cincinnati 29, Secy.

American Urological Association, Chicago, May 16-19, 1960. Dr. William M. Coppridge, Durham, N. C., Pres.; Mr. William P. Didusch, 1120 N. Charles St., Baltimore 1, Executive Secy.

Association of American Physicians and Surgeons, St. Louis, Sept. 29-Oct. 1, 1960. Dr. Louis Wegryn, Elizabeth, N. J., Pres.; Mr. Harry E. Northam, 185 N. Wabash Ave., Chicago 1, Executive Director.

International College of Surgeons, U. S. Chapter, Rome, Italy, May 15-18, 1960. Dr. Henry Meyerding, Rochester, Minn., Pres.; Dr. Ross T. McIntire, 1516 Lake Shore Dr., Chicago, Executive Director.

National Tuberculosis Association, Los Angeles, May 15-20, 1960. Dr. H. McLeod Riggins, New York, Pres.; Mrs. Wallace B. White, 651 Marlborough Rd., Brooklyn, Secy.

Radiological Society of North America. Dr. Lawrence L. Robbins, Boston, Pres.; Dr. Donald S. Childs, 713 E. Genesee, Syracuse 2, N. Y., Secy.

South Central Association of Blood Banks, Albuquerque, March or April, 1960. Dr. John B. Alsever, Phoenix, Pres.; L. Ruth Guy, Ph.D., Room 1101, Stonleigh Hotel, Dallas, Secy.

Southern Medical Association. Dr. Edwin Hugh Lawson, New Orleans, Pres.; Mr. V. O. Foster, 2601 Highland Ave., Birmingham 5, Executive Secy.

Southern Medical Association, Atlanta, Ga., Nov. 16-19, 1960. Dr. Milford O. Rouse, Dallas, Pres.; Mr. V. O. Foster, 2601 Highland Avenue, Birmingham 5, Executive Secy.

Southern Psychiatric Association, Virginia Beach, Va., Oct. 2-4, 1960. Dr. David A. Wilson, Charlottesville, Va., Pres.; Dr. Richard Proctor, Winston-Salem, N. C., Secy.

Southern Surgical Association, Boca Raton, Fla., Dec. 6-8, 1960. Dr. Francis Massie, Pres.; Dr. John D. Martin, Jr., Emory University, Ga., Secy.

Southwest Allergy Forum, Oklahoma City, April 2-5, 1960. Dr. Johnny A. Blue, Oklahoma City, Pres.; Dr. George L. Winn, Suite 104, Lister Medical Building, 430 Northwest Twelfth St., Oklahoma City, Secy.

Southwest Regional Cancer Conference. Dr. W. S. Lorimer, Jr., Fort Worth, Chm.; Mrs. Ira Frances Ball, 264 W. 11th, Fort Worth, Secy.

Southwestern Medical Association, El Paso, Oct. 20-22, 1960. Dr. Russell Deter, El Paso, Pres.; Dr. M. D. Thomas, 1501 Arizona St., 12-D, El Paso, Secy.

Southwestern Society of Nuclear Medicine, New Orleans, March 14-15, 1960. Dr. Herbert C. Allen, Jr., Houston, Pres.; Dr. J. R. Maxfield, Jr., 2711 Oak Lawn Avenue, Dallas, Secy.

Southwestern Surgical Congress, Las Vegas, Nev., March 28-31, 1960. Fort Smith, Ark., Dr. Fred H. Krock, Fort Smith, Ark., Pres.; Mary O'Leary, 813 Medical Arts Bldg., Oklahoma City, Exec. Secy.

Tri-State Medical Assembly. Dr. R. B. Langford, Shreveport, Pres.; Dr. J. W. Wilson, Jr., 940 Margaret Place, Shreveport, Secy.

United States-Mexico Border Public Health Association, Hermosillo, Sonora, Mex., April 4-8, 1960. Mr. Frank J. Von Zuben, Jr., Austin, Pres.; Dr. Jorge Román, 243 United States Court House, El Paso, Secy.

State

Private Clinics and Hospitals Association of Texas. Dr. Jack S. Maxfield, Dallas, Pres.; Mr. J. J. George, 3404 54th St., Lubbock, Executive Secy.

Texas Academy of General Practice, Dallas, Oct. 3-5, 1960. Dr. E. Sinks McLarty, Galveston, Pres.; Mr. Donald C. Jackson, 1905 N. Lamar, Austin, Executive Secy.

Texas Academy of Internal Medicine. Dr. Merton M. Minter, San Antonio, Pres.; Dr. Hugo T. Engelhardt, 1216 Main, Houston, Secy. Meetings restricted to members.

Texas Air-Medics Association, Fort Worth, April 9-11, 1960. Dr. W. W. Sumner, Fort Worth, Pres.; Dr. C. F. Miller, P. O. Box 1338, Waco, Secy.

Texas Association of Public Health Physicians, Fort Worth, April 10, 1960. Dr. Fred K. Laurentz, Houston, Pres.; Dr. B. M. Primer, 2708 Rio Grande, Austin, Secy.

Texas Chapter, American College of Chest Physicians, Fort Worth, April 10, 1960. Dr. L. M. Shefts, San Antonio, Pres.; Dr. John W. Middleton, 900 Strand, Galveston, Secy.

Texas Chapter, American Academy of Pediatrics, Fort Worth, April 11, 1960. Dr. J. T. Bennett, El Paso, Pres.; Dr. W. W. Kelton, 108 West 30th, Austin, Secy.

Texas Club of Internists. Dr. W. W. Bondurant, Jr., San Antonio, Pres.; Dr. T. Haynes Harvill, Medical Arts Building, Dallas 1, Secy.

Texas Dermatological Society, Fort Worth, April 11, 1960. Dr. Edmund N. Walsh, Fort Worth, Pres.; Dr. D. Shelton Blair, 1609 Medical Arts Building, Dallas, Secy.

Texas Diabetes Association, Fort Worth, April 10, 1960. Dr. Ralph Greenlee, Midland, Pres.; Dr. Warren W. Moorman, 901 W. Leuda, Fort Worth, Secy.

Texas Division, American Cancer Society. Dr. John A. Wall, Houston, Pres.; Mr. Curt W. Reimann, 5014 Bull Creek Rd., Austin 3, Executive Director.

Texas Heart Association. Dr. Robert E. Leslie, El Campo, Pres.; Mr. Ernest T. Guy, 404 Jesse H. Jones Library Building, Houston 25, Executive Director.

Texas Hospital Association, Dallas, May 10-12, 1960. Mr. F. S. Walters, Jr., Amarillo, Pres.; Mr. O. Ray Hurst, 2208 Main, Dallas, Executive Director.

Texas Industrial Medical Association, Fort Worth, April 10, 1960. Dr. Max E. Johnson, San Antonio, Pres.; Dr. J. G. Burdick, P. O. Box 472, Pasadena, Secy.

Texas Neuropsychiatric Association, Fort Worth, April 10, 1960. Dr. Hamilton Ford, Galveston, Pres.; Dr. E. Ivan Bruce, 1014 Strand, Galveston, Secy.

Texas Ophthalmological Association, Fort Worth, April 11-12, 1960. Dr. Max Baldridge, Texarkana, Pres.; Dr. James H. Scruggs, 2223 Austin Ave., Waco, Secy.

Texas Orthopedic Association, Fort Worth, April 11, 1960. Dr. David M. Cameron, El Paso, Pres.; Dr. Margaret Watkins, 3503 Fairmount, Dallas, Secy.

Texas Otolaryngological Association, Fort Worth, April 12, 1960. Dr. Herbert H. Harris, Houston, Pres.; Dr. Louis E. Adin, 3707 Gaston, Dallas, Secy.

Texas Pediatric Society, October, 1960, Dallas. Dr. Byron York, Houston, Pres.; Dr. C. E. Gilmore, 811 Bonham, Paris, Secy.

Texas Physical Medicine and Rehabilitation Society, Fort Worth, April 12, 1960. Dr. Edward M. Krusen, Dallas, Pres.; Dr. Oscar Selke, Medical Professional Building, Houston, Secy.

Texas Rheumatism Association, Dallas, Dec. 9, 1960. Dr. Howard C. Coggeshall, Dallas, Pres.; Dr. J. Morris Horn, 3707 Gaston, Dallas, Secy.

Texas Society of Anesthesiologists, Fort Worth, April 10, 1960. Dr. David O. Johnson, Austin, Pres.; Dr. M. T. Jenkins, Parkland Hospital, Dallas, Secy.

Texas Society of Athletic Team Physicians, Fort Worth, April 9, 1960. Dr. W. Harry Ledbetter, Wichita Falls, Pres.; Dr. Jack Brannon, 2715 Fannin, Houston, Secy.

Texas Society of Gastroenterologists and Proctologists, Fort Worth, April 10, 1960. Dr. Marcel Patterson, Galveston, Pres.; Dr. A. C. Broders, Jr., Scott and White Clinic, Temple, Secy.

Texas Society of Ophthalmology and Otolaryngology, Fort Worth, Dec. 4-5, 1959. Dr. James T. Robison, Austin, Pres.; Dr. Edwin G. Grafton, 4319 Oak Lawn, Dallas, Secy.

Texas Society of Pathologists, Inc., Fort Worth, April, 1960. Dr. Jarrett Williams, Abilene, Pres.; Dr. Sylvia Johns, 414 Navarro St., San Antonio, Secy.

Texas Society of Plastic Surgeons, Fort Worth, April 9, 1960. Dr. Willard Schussler, El Paso, Pres.; Dr. Raymond Brauer, 6615 Travis, Houston, Secy.

Texas Society on Aging, Fort Worth, April 13, 1960. Dr. Ernest W. Keil, Temple, Pres.; Mrs. William B. Ruggles, 3701 Stratford, Dallas, Secy.-Treas.

Texas Surgical Society, Fort Worth, April 3-5, 1960. Dr. Robert Wilson Crosthwait, Waco, Pres.; Dr. G. V. Brindley, Jr., Scott and White Clinic, Temple, Secy.

Texas Traumatic Surgical Society, Fort Worth, April 10, 1960. Dr. W. D. Marrs, Fort Worth, Pres.; Dr. W. E. Crump, 1300 8th St., Wichita Falls, Secy.

Texas Tuberculosis Association, Abilene, March, 1960. Mr. Zeb Rike, McAllen, Pres.; Miss Pansy Nichols, P. O. Box 6158, Austin 21, Executive Director.

District

Second District Socity, Lamesa. Dr. Oscar E. Rhode, Colorado City, Pres.; Dr. John H. Chinn, Jr., Colorado City, Secy.

Third District Society, Lubbock, 1960. Dr. Grady M. Wallace, Lubbock, Pres.; Dr. H. Fred Johnson, 2308 W. Eighth, Amarillo, Secy.

Fourth District Society, San Angelo, May 16, 1959. Dr. W. L. Smith, San Angelo, Pres.; Dr. S. Braswell Locker, 1501 11th St., Brownwood, Secy.

Fifth and Sixth Districts Society, Corpus Christi, July 8-9, 1960. Dr. John W. Chriss, Pres.; Dr. James Gabbard, 1001 Louisiana, Corpus Christi, Secy.

Seventh District Society. Dr. Robert N. Snider, Austin, Pres.; Dr. Richard Lucas, 502 W. 13, Austin, Secy.

Eighth District Society, Corpus Christi, July 8-9, 1960. Dr. M. Warren Hardwick, Angleton, Pres.; Dr. J. L. Coleman, Box 3346, Victoria, Secy.

Ninth District Society, Brenham, March 17, 1960. Dr. Haden E. McKay, Humble, Pres.; Dr. Lyman C. Blair, 1212 Rothwell, Houston, Secy.

Tenth District Society, September, 1960. Dr. J. W. McCall, Jr., Beaumont, Pres.; Dr. Irving M. Richman, 3280 Fannin St., Beaumont, Secy.
Eleventh District Society. Dr. Ben Wilson, Tyler, Pres.; Dr. Phillip W. Taylor, 833 S. Beckham, Tyler, Secy.
Thirteenth District Society, Fort Worth, Fall, 1960. Dr. Frank S. Browne, Wichita Falls, Pres.; Dr. R. D. Moreton, 1217 W. Cannon, Fort Worth, Secy.
Fifteenth District Society. Dr. Charles Wise, Naples, Pres.; Dr. George Bennett, 402 S. Bolivar, Marshall, Secy.

Clinics

Dallas Southern Clinical Society Conference, Dalals, March 21-23, 1960. Dr. T. Taynes Harvill, Dallas, Pres.; Millard J. Heath, 433 Medical Arts Bldg., Dallas 1, Executive Officer.
New Orleans Graduate Medical Assembly, New Orleans, March 7-10, 1960. Dr. Ambrose H. Storck, New Orleans, Pres.; Mrs. Irma B. Sherwood, 430 Tulane Ave., New Orleans 12, Executive Secy.
North Texas-Southern Oklahoma Fall Clinical Conference. Dr. Frank J. Lee, 1300 8th, Wichita Falls, Chm.
Oklahoma City Clinical Society Conference, Oklahoma City, Oct. 24-26, 1960. Dr. Vernon D. Cushing, Oklahoma City, Pres.; Miss Alma F. O'Donnell, 503 Medical Arts Bldg., Oklahoma City 2, Executive Secy.
Postgraduate Medical Assembly of South Texas, Houston, July 18-20, 1960. Dr. C. Alsworth Calhoun, Houston, Pres.; Mrs. W. H. Dahme, 412 Jesse H. Jones Library Bldg., Houston 25, Exec. Secy.

Board Examinations

Texas State Board of Examiners in Basic Sciences. Henry B. Hardt, Ph.D., Fort Worth, Pres.; Mrs. Betty J. Anderson, Chief Clerk, State Office Bldg., 201 E. 14th St.
Texas State Board of Medical Examiners, Fort Worth, June 20-22, 1960. Dr. M. H. Crabb, Fort Worth, Secy.; Mrs. Luanna Reddin, 1714 Medical Arts Bldg., Fort Worth, Assistant Secy.

MEDICOLEGAL NOTES

Right of Physician To Collect on Last Illness

The claims of a physician against an estate for expenses of the last illness, the topic for discussion in this article, will tend to be somewhat of a departure from the subjects dealt with in the past. However, it was felt that the decision and comments made by the Supreme Court of the State of Washington in the case of United States v. Brown, 343 P. (2d) 740, in September, 1959, merited mention.

The facts in this case disclose that a physician, Dr. Corlett, rendered extensive medical services, covering a period of 11 months, prior to the death of his patient. It was undisputed that these medical services rendered by Dr. Corlett constituted expenses of the last illness of this patient. Dr. Corlett filed a claim in the amount of $3,820 with the executor of the patient's estate for these services he had rendered. At approximately the same time the United States filed a claim against the estate in the amount of $102,470.35 for income taxes for the years 1950 and 1951, a period of some 6 to 7 years after these taxes were due initially. Both of these claims were approved by the executor of the estate, but neither was paid as the assets of the estate amounted to only $14,118.70.

Upon a trial of the case to determine the priority of these claims, the trial court rendered a verdict in favor of Dr. Corlett for $3,116 for the medical services he had rendered, and then directed that the remainder of the assets of the estate be paid to the government. The trial court based its decision upon a Washington statute which provided that the debts of an estate should be paid in the following order or priority:

(1). Funeral expenses . . . .
(2). *Expenses of the last sickness* . . . .
(3). Wages due for labor performed within sixty days immediately preceding the death of decedent.
(4). *Debts having preference by the laws of the United States* [emphasis added].

The United States appealed this decision of the trial court upon the reasoning that the quoted statute conferring a priority upon the medical services rendered the patient in her last illness superior to that afforded the government was in conflict with a federal statute, namely, 31 U.S.C.A. sec. 191, which provides that:

> Whenever any person indebted to the United States is insolvent, or whenever the estate of any deceased debtor, in the hands of the executors or administrators, is insufficient to pay all the debts due from the deceased, *the debts due to the United States shall be first satisfied* . . . [emphasis added].

The Supreme Court of Washington in its opinion, which reversed the action of the trial court, held that the entire assets of the estate must go to satisfy the claims of the government: "where the State and Federal statutes are in conflict, the Federal law must, of course, prevail."

While the Supreme Court of Washington did reverse the trial court's judgment, it was done so reluctantly as is shown by the following comments made by the court in its opinion:

> This is not the result we would have preferred to reach. It would seem to us that there is much to be said for the legislature's determination that funeral expenses . . ., expenses of last sickness . . ., and wages for labor performed within sixty days immediately preceding the death of the decedent, should have priority over debts due to the United States . . . . What makes this result particularly irksome is the realization that in some areas the United States does not exact the pound of flesh merely because it is "so nominated in the bond" (Merchant of Venice, Act IV, Scene 1) . . . . In the . . . recent case of McCain v. The Liberty National Bank . . . the United States . . . permitted, without objection, the expenses of the decedent's last illness to be listed as a claim prior in right to its own claim for unpaid taxes . . . . The court commented,
>
> "Such a concession by the Government is certainly in accord with the dictates of wisdom and humanity, for it would be unfortunate indeed *if a man in his last illness could not be attended by a physician . . . without any assurance that the doctor . . . would be paid*" [emphasis added].
>
> Here, contrary to the "dictates of wisdom and humanity," the doctor goes unpaid for his services during a last illness because it is "so nominated in the bond" . . . . The Federal statutes . . . was enacted in 1797, and there have been no significant modifications. At that time, the taxes imposed by the United States were few and light; the number who paid them were not many; and the income tax had not been thought of. Times have changed, and congressional reappraisal of the "wisdom and justice" of this statute would seem to be in order.

Although the decision in this case is just one of the many dealing with tax matters, there appear to be two very significant points present. First, it vividly demonstrates once again the government's position of, in the court's

words, exacting "the pound of flesh" to its fullest extent in all tax matters. Where only 4 years previously the government had recognized the priority of the physician's claim in a similar case, it now no longer desires merely to share in the distribution of an insolvent estate but takes the position that its claim must be satisfied to the fullest. Second, it was encouraging to see a unamimous decision from the highest court of a state cast doubt and criticism upon the "wisdom and justice" of the federal government's stand.

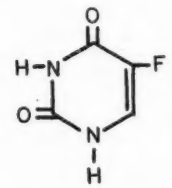
—PHILIP R. OVERTON, LL.B., Austin.

DRUG NOTES

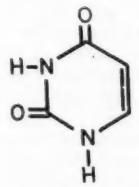
Anticancer, Antispasmodic, Anticholinergic Drugs Named

5-FLUOROURACIL (Hoffman-LaRoche, Inc.) is an anticancer agent. This new compound was synthesized by Hoffman-LaRoche chemists in collaboration with Heidelberger of the University of Wisconsin.

Certain phases of research in the field of cancer chemotherapy are based on the synthesis of antipurines and antipyrimidines as potential antimetabolites. The normal essential "metabolites," pyrimidines and purines, are integral structural components of nucleic acids. 5-Fluorouracil may be considered an antipyrimidine, and, hence, interferes with the biosynthesis of nucleic acids (fig. 1).



5-FLUOROURACIL
(Antipyrimidine)



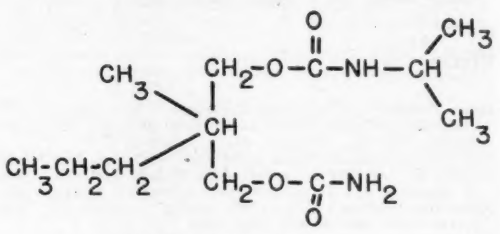
URACIL
(Pyrimidine Metabolite)

Fig. 1. 5 Fluorouracil is an anticancer agent which interferes with the biosynthesis of nucleic acids. Uracil is an integral structural component of nucleic acids.

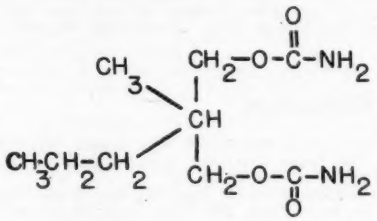
Nucleic acids are absolutely essential for normal cell growth. On the basis of the abnormally high reactivity of malignant cells, it is believed that they preferentially will utilize the administered antimetabolite. Consequently, the antimetabolite exerts an over-all effect of creating a deficiency of the normal pyrimidine metabolite. Thus, it interferes with nucleic acid biosynthesis and provokes unbalanced cell growth and death of the malignant cells.

This new anticancer drug is available for experimental and clinical study in ampules of 10 cc. each (50 mg. per cc.). Data from 1,000 cases reported by 70 different groups of clinicians indicate favorable results. Generally, the cases have been restricted to those patients who received a dose of at least 15 mg. per kilogram of body weight for four doses intravenously, or who demonstrated toxic manifestations. It has been concluded that the dose must be high enough to induce some toxic effects if antineoplastic results are to be obtained. The available data indicate that this new drug exerts a palliative effect in some patients with cancer of the colon, breast, bladder, and ovary.

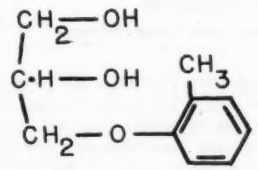
RELA (carisoprodol, Schering) also is commercially available as Soma by Wallace. Rela is sold under license from Wallace Laboratories. Carisoprodol is very closely related chemically to the well known meprobamate (Equanil, Wyeth; Miltown, Wallace) and mephenesin (Tolserol, Squibb) (fig. 2).



CARISOPRODOL



MEPROBAMATE



MEPHENESIN

Fig. 2. Formulas showing the close chemical relationship of Carisoprodol, Meprobamate, and Mepenesin.

The replacement of hydrogen on one of the carbamyl nitrogens of meprobamate with an iso-propyl group yields carisoprodol.

Structure activity studies reveal that this compound possesses a qualitatively different type of pharmacological action than the parent compounds. Carisoprodol is a centrally acting muscle relaxant that differs from mephenesin (the classical pioneer of this field that has served as a chemical prototype for both meprobamate and carisoprodol). Mepenesin exerts its muscle relaxant action on the basis of its effect on the spinal cord, whereas carisoprodol acts centrally as a muscle relaxant and also possesses marked analgesic action and certain atropine-like effects on the central nervous system. Carisoprodol does not share the tranquilizing action attributed to meprobamate probably because it does not affect the limbic system, thalamus, and general behavior in the same way as meprobamate.

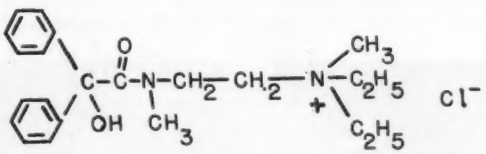
The pharmacological properties of carisoprodol suggest that this new muscle relaxant may be of value in relieving pain and spasm related to skeletal muscles and joints.

PRINADOL (phenazocine, Smith Kline and French) is a new synthetic narcotic analgesic. Its chemical structure reveals certain similarities to morphine and related compounds. As in the case of other synthetic analgesics (for example, meperidine, methadone), phenazocine possesses certain structural features which also are present in morphine, the prototype analgesic.

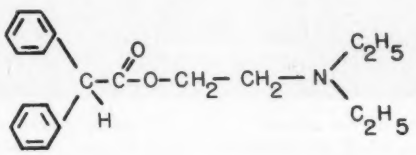
Essentially, research in the field of synthetic analgeiscs is directed towards the preparation of a compound possessing an appreciable degree of analgesic activity with a very minimum of side effects and untoward manifestations, that is, specifically a low incidence of physical dependence and/or physiological addiction. On the basis of experimental data released by Smith Kline and French, the pharmacological properties of phenazocine indicate that the endeavors of Eddy and colleagues, medicinal chemists of the National Institutes of Health, have been quite fruitful. It is reported that the analgesic activity of this new narcotic is 3 to 4 times more potent than that of morphine. Furthermore, phenazocine produces less respiratory and circulatory depression than morphine. Physical dependence and addiction liability are also significantly less with phenazocine than with morphine.

COTRANUL (benzamethamine, Stuart) is a new anticholinergic agent. Chemically and pharmacologically it may be considered as related to the classical antispasmodics: atropine; Trasentine (Ciba); Pavatrine (Searle); and Banthine (Searle).

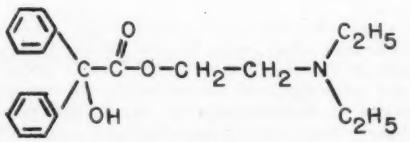
Chemically, it is a substituted amide of benzilic acid and beta-diethylaminoethylamine, the amine analogous to beta-diethylaminoethanol. On the other hand, Suavitil, (Merck, Sharp and Dohme) is an ester of benzilic acid and the substituted ethanol previously mentioned; hence benzamethamine also bears some resemblance to this tranquilizer (fig. 3).



COTRANUL



TRASENTINE



SUAVITIL

Fig. 3. Formulas showing the chemical similarity of Cotranul (a narcotic analgesic) to Trasentine (an antispasmodic) and to Suavatil (a tranquilizer).

A survey of the literature reveals that benzilic acid esters related to atropine are relatively potent anticholinergic agents; therefore, it is of interest to note that this benzilic acid amide, benzomethamine, possesses marked anticholinergic activity. Consequently, this new compound suppresses both excessive gastric secretions and intestinal motility. Benzomethamine is reported to be highly effective and useful in numerous conditions characterized by general gastrointestinal disorders. The major conditions for which benzomethamine therapy are indicated include gastric and duodenal ulcers as well as hyperaspastic conditions of the intestinal tract.

VASOFLEX (N-cinnamyl-methylamino-2-phenyl propane hydrochloride, Merrell) is a new coronary vasodilator which is chemically related to the catechol amines. It produces significant increase in the coronary blood flow of man when administered intravenously.

As most internists will agree, the search for agents possessing such a pharmacological property is an important phase in the management of patients with coronary artery malfunction. Consequently, this new drug is expected to enjoy extensive therapeutic acceptance since an additional desirable feature is the lack of any alteration in the heart rate and arterial blood pressure. Investigators who have studied this new coronary vasodilator emphasize that any agent designed to increase coronary blood flow should be studied as thoroughly as possible before clinical evaluation.

—HERBERT SCHWARTZ, M.S. and
JAIME N. DELGADO, M.S., Austin.

EDUCATION

Postgraduate Courses

Glaucoma, San Antonio, January 23.—The University of Texas Postgraduate School of Medicine will present a seminar on glaucoma, January 23, in San Antonio. Five guest speakers will make up the faculty. The seminar begins at 9 a.m.; tuition is $15. For further information, those interested may check with the University of Texas Postgraduate School of Medicine, Robert B. Green Memorial Hospital, San Antonio.

Alcoholism, San Antonio, January 24.—A seminar on "Alcoholism—Diagnosis and Management" will be given January 24 in San Antonio at the Robert B. Green Memorial Hospital, beginning at 9 a.m. The tuition for the seminar is $15. A staff of five will present lectures throughout the day. Doctors may write the University of Texas Postgraduate School of Medicine, Robert B. Green Memorial Hospital, San Antonio.

Ophthalmic Plastic Surgery, New York, February 29-March 4.—A part time course in ophthalmic plastic surgery will be given by the New York Postgraduate Medical School from February 29 to March 4 in New York. It will cover the essentials of ophthalmic plastic surgery for the practicing ophthalmologist. Special emphasis is laid on the more common fundamental procedures peculiar to lid surgery. For additional information, those interested may write the Office of the Associate Dean, New York University Post-Graduate Medical School, 550 First Avenue, New York 16.

Clinical Physiology, New York, March 3-April 21.—A clinical physiology course on the applications of basic physiology to diagnostic and therapeutic problems will be given by the New York University Post-Graduate Medical School, March 3-April 21, on Thursdays from 7:30 to 9:30 p.m. The lectures will summarize the latest concepts of the physiology of the heart, vascular circuits, the kidneys, the lungs, the liver, endocrine glands, and the body fluids. Clinical disorders will be discussed as evidence of the inability of a particular organ system to reach the functional capacity necessary to perform the physiologic task. Particular emphasis will be placed on principles of metabolism including body fluid and electrolyte metabolism. For additional information, those interested may write the Office of the Associate Dean, New York University Post-Graduate Medical School, 550 First Avenue, New York 16.

Medicine and Surgery, Temple, March 6-8.—"Current Topics in Medicine and Surgery" will be stressed at the Scott and White Clinic's eighth annual Postgraduate Conference, March 6-8, at Temple. It is sponsored by the Scott, Sherwood and Brindley Foundation. The course is approved for credit for general practice. Registration fee is $25; registration forms may be obtained by writing the Scott, Sherwood and Brindley Foundation, Scott and White Clinic, Temple. Wives are invited to attend. A full round of social activities, including a luncheon and dinner, are planned for physicians and their wives and are covered by the registration fee.

Motor Anomalies of the Eye, New York, March 7-18.—A full time course presented in two parts will be given on motor anomalies of the eye by the New York University Post-Graduate Medical School. Part I will be taught March 7-12, with the practical approach being given; part II will be March 14-18. The question of treatment, both operative and nonoperative, and the use and limitations of each will be considered. For additional information, doctors may write the Office of the Associate Dean, New York University Post-Graduate Medical School, 550 First Avenue, New York 16.

Occular Expressions of Systemic Disease, New York, March 21-25.—A part time course concerning ocular expressions of systemic disease will be offered March 21-25 from 2 to 5 p.m. It will cover the clinical and pathological changes associated with diabetes, hypertension, nephritis, thyroid dysfunction, blood dyscrasias, and optic nerve disease. Some associated eye and skin evidences of systemic diseases will be discussed. Doctors may write for additional information to the Associate Dean, New York University Post-Graduate Medical School, 550 First Avenue, New York 16.

Surgery of the Eye, New York, March 28-April 2.—A full time course on the surgery of the eye will be given by the New York University Post-Graduate Medical School, March 28 through April 2. It will consist of lectures on cataract surgery, glaucoma surgery, ocular muscle surgery, ptosis surgery, surgical treatment of retinal detachment, corneal transplantation, and plastic surgery of the eye. Practical work on technique of eye operations on the cadaver will be done. Doctors interested in further information may write the Associate Dean, New York University Post-Graduate Medical School, 550 First Avenue, New York 16.

University of Texas Medical Branch

A gift of $417,803 has been received by the University of Texas Medical Branch at Galveston from the Sealy and Smith Foundation for a series of improvements to certain buildings on the campus. The largest portion of the gift will be used to furnish and equip the new Edward Randall Pavilion (formerly Negro Hospital), and the Marvin Graves Building (State Psychopathic Hospital).

Dr. James V. Warren, professor and chairman of the Department of Medicine at the Medical Branch, participated in a symposium held by the Oregon State Heart Association during October, in Portland. Dr. Warren also attended the October 23-25 meeting of the American Heart Association in Philadelphia.

Dr. George W. N. Eggers, professor of orthopedic surgery at the Medical Branch, was chosen president-elect at the American Academy for Cerebral Palsy's annual meeting, November 30-December 2 in Los Angeles.

A microbiology seminar was held December 7 at the Medical Branch with Dr. Samuel Ajl, Section on Molecular Biology, National Science Foundation, Washington, D. C., as the speaker. His subject was "Biochemistry of the Toxin from Pasteurella Pestis."

Dr. Willard R. Cooke's Portrait Unveiled in Medical Branch Library

Dr. Willard R. Cooke's portrait became the twenty-first to be hung in the gallery of great Texas medical men at the library of the University of Texas Medical Branch in Galveston recently.

Dr. Cooke retired in September as professor emeritus of the school's Department of Obstetrics and Gynecology. He taught at the Medical Branch for 35 years. More than 3,000 doctors learned their skills in obstetrics and gynecology under Dr. Cooke.

"The influence of this man has been present at the bedside of countless thousands of Texas women during the crucial hours of their lives through the ministrations of

Looking at the portrait of Dr. Willard R. Cooke of Galveston, which was unveiled recently in the University of Texas Medical Branch library, are (left to right) Dr. John D. Weaver of Austin, president of the Dr. Cooke Club; Dr. John B. Truslow, executive dean and director of the Medical Branch; Dr. Cooke; and Miss Elisabeth Runge, chief librarian.

the men whom he taught and inspired," Dr. John B. Truslow, executive dean and director of the Medical Branch, said at the unveiling ceremony. "Their affection for him and appreciation of his inspiration are appropriately expressed in their formation of the Willard Cooke Club, and their visit to our campus on this occasion," he added.

The Cooke portrait was painted by Roberto Fantuzzi, distinguished Italian artist, who was commissioned for the work by the Dr. Cooke Club of which Dr. John D. Weaver of Austin is president.

Faculty Named for U.T. Cruise to Caribbean

Four physicians have been announced for the faculty of the University of Texas Postgraduate School of Medicine's annual Texas Medical Cruise to the Caribbean, May 6-19, which will include such ports of call as Havana, Cap Hatien, Port-au-Prince, Montego Bay, and Grand Cayman.

The members of the faculty will be Dr. Alfred E. Leiser, clinical instructor in medicine, Baylor University College of Medicine, and clinical assistant professor of medicine, University of Texas Postgraduate School of Medicine, Houston; Dr. L. Maxwell Lockie, professor and head of the Department of Therapeutics, University of Buffalo School of Medicine, Buffalo, N. Y.; Dr. Jarrell E. Miller, clinical professor of radiology, University of Texas Southwestern Medical School, Dallas; and Dr. Fred M. Taylor, associate professor of pediatrics, Baylor University College of Medicine, Houston.

Among the topics to be in the curriculum will be the following: roentgen manifestations of intestinal obstruction; abdominal pain in childhood; diseases of the adrenal cortex; rheumatoid arthritis, x-rays in health and disease; behavior problems in childhood; peptic ulcer; cancer of the accessible sites; recent advances in disturbances of the thyroid gland; antibiotics and treatment of infections; carcinoma of the breast; adolescent goiter; cardiac roentgenology; chamber analysis; and blood and blood preservatives and blood substitutes.

The itinerary will allow 25 hours of category I teaching credit for physicians desiring American Academy of General Practice credit.

Law-Science Short Courses Set for February in Houston

Personal injury problems and medicolegal trial technique will be the topics of the Law-Science Academy and Foundation short course, February 15-17, and the Law-Science Institute short course, February 18-20, in Houston.

Among the topics of discussion at the Law-Science Academy and Foundation short course will be medicolegal aspects of head injuries, medicolegal aspects of stress, medicolegal sources and trial techniques, current trends in products liability litigation, and medicolegal technique. At the Law-Science Institute short course, the following subjects will be featured: surgical terminology and concepts and their medicolegal implications, medicolegal aspects of more common orthopedic disabilities, and medicolegal aspects of neck complaints.

Registration for the Law-Science Academy short course is $25 per day or $60 for 3 days; the registration fee is $55 for the Law-Science Institute short course. For further information, those interested may write to Dr. Hubert Winston Smith, Director, Law-Science Institute, University of Texas, Austin 12.

Insurance Research Funds

The Life Insurance Medical Research Fund has aided three heart research programs in Texas during the past year.

These programs include research by Dr. John C. Porter at the University of Texas Southwestern Medical School in Dallas on the role of the hypothalamus in the control of the anterior pituitary-adrenocortical axis in the regulation of kidney excretion of sodium; Dr. H. G. Swann, at the University of Texas Medical Branch at Galveston on indicating a relatively large interstitial space in the kidneys which is functionally distended with blood plasma plus fluid resorbed from the tubules; and Dr. James V. Warren of the Medical Branch at Galveston, who is studying the factors in the human cardiac output with the aim of clarifying types of heart failures.

6,860 Students Received M.D. Degrees in 1958-1959

The 1958-1959 graduating class receiving the doctorate of medicine degree numbered 6,860, only one less than in 1957-1958, according to the annual report of the Council on Medical Education and Hospitals of the American Medical Association.

These two classes were the largest except for the 1954-1955 year when the class was 6,977. The increase in that term was occasioned by including as graduates the 50 students completing the intern year then required by Stanford University.

According to the council's report, which appeared in the November 14 issue of the *Journal of the American Medical Association,* 43 medical schools had decreases in the number graduated while 34 schools experienced increases.

MEDICAL MEETINGS

Radiation Hazards Included In Conference Discussion

The latest developments in planning for control of radiation hazards and other regional nuclear programs, which included the activities of the Regional Advisory Council on Nuclear Energy and recent legislation passed at the national level, were reported at the Southern Governors' Conference held in October in Asheville, N. C. States participating in the conference were Alabama, Arkansas, Delaware, Florida, Georgia, Kentucky, Louisiana, Maryland, Mississippi, North Carolina, Oklahoma, South Carolina, Tennessee, Texas, Virginia, and West Virginia.

Of primary importance was the passage during the last session of the Congress of an amendment to the Atomic Energy Act of 1954. The amendment recognizes the need for cooperation between the states and the Atomic Energy Commission with respect to control of radiation hazards and provides for the establishment of procedures which would discontinue certain of the commission's regulatory responsibilities with regard to the byproduct, source, and special nuclear materials, turning these functions over to the states. The amendment assures state authority in the future not only in the control of radiation hazards, but also in the areas of workmen's compensation, insurance coverage, water and air pollution, utility rate regulation, employee safety and record keeping, intrastate transportation, inspection, and zoning and building codes. Over-all, such legislation prevents the threat of centralization of atomic matters in the federal government.

The main achievement of the Regional Advisory Council on Nuclear Energy, a group which acts as a nuclear information center for the southern states and which was set up by the conference in 1955, has been the formation of a Southern Interstate Compact on Nuclear Energy.

Resulting also from the council's endeavors has been the formation of 15 state nuclear advisory committees or

commissions among the 16 participating states, a figure which compares with a total of 36 such bodies throughout the country.

Also pointed out was the growing awareness by the states of the benefits now available in the atom and of the coming need for wise and informed regulation at the state level. Numerous special interest forums and seminars have been held. Education, industry, and agricultural nuclear research have received special attention. Noteworthy achievements of individual states were mentioned. Among these were a 50,000 kilowatt nuclear power plant being built in Florida, a peanut strain developed at Raleigh through nuclear research which yields one-third more per acre than other varieties, the eradicating through nuclear techniques of screw worms, whose damages had been costing southeastern farmers $20,000,000 a year, and a shipside servicing vessel for nuclear powered ships being constructed in Houston.

Rehabilitation of Mentally Ill Theme of February Conference

Rehabilitation of the mentally ill will be the theme of the twenty-seventh annual Conference of the Texas Association for Mental Health, which will be held February 18-19 at the Driskill Hotel in Austin.

Among the topics to be discussed at the conference will be the new approaches in rehabilitating the mentally ill, the role of mental health associations in rehabilitation, helping the hospitalized patient, medical aftercare, foster homes and half-way homes, ex-patient clubs, volunteer services, education services, and public information services.

Physicians to be included on the program will be Dr. Eugene MacDonald, Galveston; Dr. David Wade, Austin; Dr. Jim May, Dallas; Dr. William Lhamon, Houston; Dr. C. J. Ruilman, Austin; Dr. Margaret Sedberry, Austin; and Dr. Lee Scarborough, Austin.

Other speakers at the conference will be Robert Sutherland, Ph.D., director, Hogg Foundation for Mental Health, Austin; Ozzie Simmons, Ph.D., associate professor of anthropology, Harvard University; Paul Southern, M.A., Th.D., Austin; Colonel Albert J. Glass, chief psychiatry and neurology consultant, Department of the Army, Washington, D. C.; Lawrence J. Linck, Executive Director, National Association of Mental Health, Chicago; Miss Vivian Acord, Director of Public Information, Indiana Mental Health Association, and Governor Price Daniel, Austin, Governor of Texas.

A high light of the 2 day conference will be the annual banquet on Friday evening at which recognition for mental health achievements, a dramatic story of a former mental patient, and a special program presented by the patients at the Confederate Home in Austin will provide the Conference's concluding event. Miss Vivian Acord, director of public information with the Indiana Mental Health Association, will tell her story, "The Long Journey Home."

Doctors desiring further information on the program may write John Lane, Executive Director of the Association, 2410 San Antonio, Austin.

Heart Symposium in Fort Worth

The Fort Worth Heart Association will hold a 1 day symposium on "Congestive Failure, Arrhythmias, and Hypothermia" on February 21 at the Fort Worth Academy of Medicine in Fort Worth.

Speakers at the symposium will include Dr. Will C. Sealy, professor of surgery, Duke University School of Medicine, Durham, N. C.; Dr. John K. Lewis, professor of medicine, Stanford University School of Medicine, San Francisco; and Dr. George C. Griffith, professor of clinical cardiology, University of Southern California School of Medicine, Los Angeles.

There will be no registration fee. Those interested in further information may write Mrs. Wanda Cunningham, Executive Secretary, Fort Worth Heart Association, 3855 Tulsa Way, Fort Worth.

Oklahoma Colloquy to Be Held March 24-26 in Oklahoma City

A program on adrenal steroids has been developed for the third annual Oklahoma Colloquy on Advances in Medicine to be held March 24-26 at the University of Oklahoma Medical Center, Oklahoma City.

Fifteen guest lecturers and 13 members of the medical center faculty will participate.

Scientific papers will cover clinical application of the steroids in endocrinology, infectious diseases, gastroenterology, rheumatic disease, hematological diseases (including the leukemias and immunohematological disorders), and neoplastic, collagen, renal, and allergic diseases. Others will deal with the basic physiological and biochemical aspects of adrenal steroids, and the pharmacology and side effects.

Speakers for the colloquy will include Dr. Charles W. Daeschner, Jr., Houston; Dr. William J. Harrington, St. Louis; Dr. Oscar Hechter, Shrewsbury, Mass.; Dr. S. Richardson Hill, Jr., Birmingham, Ala.; Dr. David M. Hume, Richmond, Va.; Dr. Dwight J. Ingle, Chicago; Dr. James C. Melby, Little Rock, Ark.; Dr. Don H. Nelson, Los Angeles; Dr. Bram Rose, Montreal, Canada; Dr. Lewis H. Sarett, Rahway, N. J.; Dr. Richard T. Smith, West Point, Pa.; Dr. Louis J. Soffer, New York; Dr. Howard M. Spiro, New Haven, Conn.; Dr. Ralph Tompsett, Dallas; and Dr. Lawson Wilkins, Baltimore.

In addition to the general sessions, special interest meetings are planned in the fields of medicine, pediatrics, surgery, and basic science. A dinner meeting October 25 will give registrants an opportunity to meet with the participants informally.

The colloquy was planned by the Oklahoma Medical Center Department of Medicine and Office of Postgraduate Education in collaboration with the Oklahoma City Internists Association, Oklahoma City Surgical Society, and Oklahoma City Pediatrics Society. Merck Sharp and Dohme is a sponsor.

Additional information may be obtained by writing the Office of Postgraduate Education, University of Oklahoma Medical Center, 801 Northeast Thirteenth, Oklahoma City.

Family Doctors Set Meeting in Philadelphia

More than 4,000 family doctors and 3,000 residents, interns, exhibitors, and wives are expected to attend the 4 day program of the American Academy of General Practice's twelfth annual scientific assembly, March 21-24, in Philadelphia.

The Philadelphia assembly program lists 31 prominent medical educators who will discuss a variety of subjects ranging from arthritis and anemia to surgery, geriatrics, and mental health. More than 100 scientific and 300 technical exhibits also will be on display.

During the meeting, doctors will have a chance to be on the other end of a stethoscope during physical examination sessions. More than 600 doctors took physical examinations at the last academy meeting, and many learned for the first time that they needed immediate medical attention.

The academy's policymaking Congress of Delegates will meet prior to the scientific sessions on March 19. A reception and dance honoring the president of the organization will be held the evening of March 23.

The assembly is combined this year with the Philadelphia Postgraduate Institute. For further information concerning the program, doctors may write Mac F. Cahal, Executive Secretary, American Academy of General Practice, Volker Boulevard at Brookside, Kansas City 12.

American College of Allergists Plans Session March 2-4

The American College of Allergists will hold its sixteenth annual meeting March 2-4, following the college's graduate instructional course February 28-March 1 at Miami Beach, Fla.

A faculty of 40 instructors will provide the 3 day program of the congress. Among the topics to be discussed will be a review of the immunologic aspects of thyroiditis; higher dosage levels for co-seasonal treatment of pollinosis; anaphylactic allergic reactions to influenza vaccine; deafness as a manifestation of allergy; pollen immunization with emulsified extracts; problems in the management of severe allergic dermatitis; and a critical evaluation of the complications of corticosteroid therapy.

Panel discussions on specific hyposensitization and perennial respiratory allergy, basic mechanism and management will be held. Sectional sessions will be on pediatric allergy, technology, psychosomatic medicine, dermatologic allergy, and allergy of the nervous system.

The graduate instructional course will present the following subjects, one each day: primary considerations of some aspects of the field of allergy, clinical applications to present day knowledge in allergy, and progress in allergy: the allergist of today and tomorrow. The fee for the three days is $50 ($15 for members). Information concerning the course and the congress may be obtained by writing the American College of Allergists, 2049 Broadway, Boulder, Colo.

Colorado to Be Host to College of Surgeons Section

Surgeons and related medical personnel are invited to attend the 3 day sectional meeting of the American College of Surgeons in Colorado Springs, March 21-23.

The program will include scientific reports on topics of current concern such as management of the injured hand, treatment of duodenal ulcer, appendicitis, treatment of neck fractures, surgical convalescence, cancer, and pregnancy. Symposiums on injuries, cancer, and hospital infections will be presented. Also, selected medical motion pictures and cine clinic films from the 1959 clinical congress will be shown.

For further information on the program, those interested may write the American College of Surgeons, 40 East Erie Street, Chicago 11.

Texas speakers will include Dr. John M. Pace, Dallas, Dr. R. Lee Clerk, Jr., Houston, and Dr. Nylene E. Eckles, Houston.

Cell Physiology Cancer Symposium Topic

Five sessions dealing with different aspects of cell physiology of neoplasia will be conducted during the fourteenth annual symposium on fundamental cancer research at the University of Texas M. D. Anderson Hospital and Tumor Institute in Houston, February 25-27. Starting Thursday morning, half-day sessions will be devoted to the nucleus, the cytoplasm, nucleic acids, cell growth and cell development, and a continuation of cell growth and cell development.

Speakers will include P. C. Koller, London; George Yerganian, Boston; M. J. Kopac, New York; M. L. Watson, Rochester, N. Y.; Charles Oberling, Villejuif, France; A. J. Dalton, Bethesda, Md.; Alex B. Novikoff, New York; T. O. Caspersson, Stockholm; William S. Beck, Boston; John S. Coulter, Philadelphia; E. Chargaff, New York; Cecilie Leuchtenberger, Boston; W. R. Duryee, Washington; J. Herbert Taylor, New York; Riojun Kinosita, Duarte, Calif.; Thomas J. King, Philadelphia; and representatives of the M. D. Anderson staff.

There will be a social hour and buffet Friday evening.

OF GENERAL INTEREST

Ground Breaking Ceremonies For New Dallas Hospital

Ground breaking ceremonies for the new $10,000,000 St. Paul Hospital to be constructed on an 18 acre site in Southwestern Medical Center in Dallas were held December 8. The new hospital building, which will provide an additional 532 beds to the hospital facilities of the community, is scheduled to be ready for use in 1962.

"The development of the new St. Paul Hospital . . . will mark the largest single expenditure for hospital facilities in the history of our city, and it will give another important new dimension to the fast developing Southwestern Medical Center," said Fred F. Florence, chairman of St. Paul Hospital's lay advisory board, at the ground breaking ceremonies.

Completion of the new hospital will bring the total investment in buildings and improvements in Southwestern Medical Center to more than $30,000,000, said Mr. Florence. The University of Texas, through Southwestern Medical School, and Parkland Memorial Hospital have already invested more than $20,000,000 here. These great projects foreshadow the tremendous medical development which leaders such as the late Dr. Edward H. Cary, Karl Hoblitzelle, and others have envisioned for the medical center, according to Mr. Florence.

The new hospital is to be financed with $4,375,524 pledged by the public, $3,000,000 in Hill-Burton funds, and private contributions and financing arranged by the Daughters of Charity, the Catholic Sisters who operate the hospital. The remodeling program will provide facilities for 486 long term patients and an over-all total of 1,018 beds.

Medical Word Booklet Available

A word booklet which gives an introduction to medical terminology is available through the courtesy of the Birtcher Corporation for those interested. It is designed to be of particular value to doctors' receptionists, nurses, and med-

ical students who would like to have an understanding of medical words.

Copies of the booklet, written by the president of the corporation, Cecil J. Birtcher, may be obtained by writing to the Birtcher Corporation, 4371 Valley Boulevard, Los Angeles 32. A Spanish version of the booklet is available in addition to the English one. Persons are asked to specify which version they want upon request.

Personals

Dr. May Owen, Fort Worth, President-Elect of the Texas Medical Association, was honored November 5 by the Auxiliary of the Tarrant County Medical Society at a dinner in Fort Worth. Mrs. H. S. Renshaw, past president of the Auxiliary to the Texas Medical Association, presented a fluted copper and enamel tray to Dr. Owen.

Among other honors recently bestowed upon *Dr. Owen* was being named distinguished alumna of Texas Christian University at the annual awards luncheon during the university's homecoming, November 21, in Fort Worth. She was recognized for her contributions in the field of medicine and devotion to her fellow man. Dr. Owen also has been congratulated officially by the board of directors of the American Society of Clinical Pathologists upon her selection to head the Texas Medical Association.

Dr. Warren Ross, Temple, a resident at Scott and White Clinic, was awarded second place for his paper on "Multiple Myeloma" in the annual competition of the Western Orthopedic Association. He received a cash award, plus all expenses to the Western Orthopedic meeting in Denver.

An exhibit designed and built by *Dr. Keith Barnes,* one of the newest permanent displays at the Fort Worth Children's Hospital, is entitled "Light Can Bend." The display was inspired by members of the Woman's Auxiliary to the Tarrant County Medical Society, who underwrote the cost of the exhibit.

Dr. Robert G. McCorkle of Austin was elected to fellowship in the International College of Surgeons in Chicago, September 17.

Dr. Aureliano Urrutia, Sr., San Antonio, has condensed the 87 years of his life into a 24 page booklet entitled, "Dr. Aureliano Urrutia—His Life and His Origin."

Recently elected as fellows of the American Academy of Pediatrics were *Drs. W. J. Halden* and *Marjorie Lawlis* of Austin. Also, *Drs. Joe T. Gilbert* and *Charles R. Queen* of Austin were elected fellows of the American Academy of Clinical Pathology.

Dr. Michael E. DeBakey, Houston, gave the third annual John Alexander Lecture at the University of Michigan Medical Center in Ann Arbor, November 12. His subject was "Surgery of the Aorta and Its Major Branches."

Dr. Robert B. Elliott, Houston, was elected to the board of governors of the American Fracture Association at the meeting held in New Orleans in November.

Dr. M. A. King of Frankston was honored on his birthday, October 25, by the citizens of Frankston with a reception and open house.

Dr. Abe Greines, Fort Worth, was cited recently by the North Fort Worth Kiwanis Club as an outstanding citizen. He is past president and director of the club.

Dr. Lowell S. Miller and *Dr. John H. Grimm,* Houston, were awarded a certificate of merit for their exhibit entitled, "External Supervoltage Irradiation in Infiltrating Cancers of the Urinary Bladder," at the forty-fifth annual meeting of the Radiological Society of North America in Chicago, November 16-20.

Dr. John Victor Ellis of Amarillo was recently honored as "Boss of the Year" by the local chapter of the National Secretaries Association. The award was made at an annual banquet at which the outstanding boss in Amarillo is recognized.

The son of Mrs. Walter H. Moursund, Sr. of Houston and the late Dr. Moursund, who was for many years dean of the Baylor University College of Medicine, *Col. Walter H. Moursund, Jr.,* of Washington, D.C., died of pneumonia November 20 in Washington at the age of 50. Colonel Moursund was a graduate of Baylor University College of Medicine. He practiced in Dallas, specializing in internal medicine, before entering active military medical service in September, 1940.

Mrs. Blanche Randall Haden, wife of the late Dr. Henry C. Haden, died November 24 in her home in Houston. Mrs. Haden was past president of the Woman's Auxiliary to the Texas Medical Association. Upon the death of her husband 3 years ago, she presented to the Baylor University College of Medicine a memorial fund of $25,000, plus the extensive medical library of her husband.

David Paul was born to *Caroline Duncan* and *Paul Arceneaux* October 5 in New Orleans. *Dr. and Mrs. Lloyd L. Pickett* announce the arrival of a son born November 1 in Galveston.

Dr. and Mrs. Francisco E. Baca of El Paso are the parents of a girl, born November 23.

The daughter of *Dr. and Mrs. Hugo Auler* of Austin, Mary Ann, was married to Dr. Greenwood S. Wooten, Jr., on January 9.

Dr. and Mrs. Marion Wallace McCurdy of San Antonio have announced the wedding of their daughter, Miss Ruby Anita "Runita" McCurdy, to Martin Edgar Goode, III, of Covington, Ga. The wedding will take place on Christmas Day.

Dr. J. Layton Cochran, San Antonio, has been elected a director of the American Cancer Society from Region VII, which includes Texas, Arkansas, Oklahoma, Kansas, and Missouri, at the society's annual meeting, October 30. At the meeting *Dr. G. V. Brindley of Temple,* who has been a regional director and member of the national board of directors for several years, was elected an honorary member of the national society.

Dr. Ray K. Daily of Houston was one of the 11 women physicians honored as "1959 Medical Women of the Year" by member branches of the American Medical Women's Association at a meeting at Hot Springs, Ark., recently.

Dr. and Mrs. John E. Douglas are the parents of a boy, Keith Allen, born November 6 in Austin.

Mental Health Grants Available

Thirteen in-service training grants totaling $2,295 have been made to Texas mental health personnel by the Southern Regional Education Board under its program in mental health training and research. To date, 34 grants have been awarded to Texas mental health employees under this program—the second largest number in the southern region.

The board in-service training grants were made possible by a $90,000 grant for this purpose by the National Institute of Mental Health. They are designed to enable staff members of mental hospitals or training schools in the South to observe new or unusual programs in other hospitals anywhere in the country to help them improve their programs.

Applications for grants still are being accepted by the board. There is no deadline, and applications are acted upon as they are received. Persons interested in the grants should write directly to the Southern Regional Education Board, 130 Sixth Street, N.W., Atlanta 13, Ga.

Golf Champions Head 1960 Heart Fund Campaign

Two noted golf champions, Jimmy Demaret and Ben Hogan, will be co-chairmen of the 1960 Texas Heart Fund Campaign, the annual February fund raising campaign which supports the research, education and community service programs of the Heart Association.

The Heart Fund Campaign will reach its high point on Sunday, February 28, when thousands of volunteers will conduct a door-to-door collection among their neighbors in all 50 states and in the territory of Puerto Rico.

Four Texas research scientists who are receiving monies through the association's research program will speak at forthcoming meetings of several Texas Heart Association chapters in order to report the progress of heart research and part of the public education programs of the chapters. The researchers are Dr. Denton A. Cooley, Houston; Dr. Don Seldin, Dallas; Dr. Marvin Siperstein, Dallas; and Dr. Hugh Wilson, Dallas.

The American Heart Association, with which the Texas association is affiliated, recently awarded more than $48,000 to eight Texas researchers. These grants were among 244 totaling $1,765,233 provided to scientists throughout the country, under the policy of the American Heart Association to earmark at least 50 per cent of its yearly income to research.

Texans who received grants are Dr. Jack A. Pritchard, Dallas; Dr. Marvin D. Siperstein, Dallas; A. W. B. Cunningham, Galveston; Dr. John R. Derrick, Galveston; Dr. James V. Warren, Galveston; and Russel A. Guggins, Houston.

Another item to which the Texas Heart Association has called attention is that Senator Lyndon Johnson was awarded the first honorary life membership in the association on September 22 in El Campo. A membership plaque was given to the Senator in appreciation of his efforts on behalf of the Heart Association, with special reference to his "two terms" as state fund campaign chairman in 1955 and 1959.

A plan for reorganization of the Heart Association is being considered as the campaign for funds approaches. The final step remaining prior to instituting the plan will be a vote of the members at a special meeting on January 23 in Fort Worth. Approval already has been given to reorganization by the board of directors.

Nursing League Appoints Advisory Group on Accreditation of Schools

The National League for Nursing has appointed an advisory committee on the accreditation of hospital schools of nursing, with equal representation from the American Hospital Association and the National League for Nursing, announced Miss Inez Haynes, the league's general director.

The committee will advise the league on means of simplifying procedures and stabilizing financing of the league's accreditation program, as it relates to hospital nursing schools. Its appointment is the culmination of joint explorations by the league and the American Hospital Association of ways of improving accreditation.

Originally, the AHA had asked the nursing league to join in establishing an independent joint commission on accreditation of hospital schools of nursing. In response, the league affirmed its responsibility for accrediting nursing education programs and suggested the formation within the league of an advisory committee of 14, with seven representatives from each organization.

National Foundation Awards 80 Grants During 1959

Texas chapters of the National Foundation have joined with other states in the foundation's campaign during the month of January. In Texas, the majority of the funds collected will be used for poliomyelitis, whereas in other states a considerable amount will be used for research in related fields.

The foundation made a substantial beginning in the year 1959 in its new target areas—birth defects and arthritis. At the same time the March of Dimes organization again led the nation's fight against widespread flareups of epidemic poliomyelitis reminiscent of the pre-Salk vaccine years.

In the past year, the organization has awarded more than 80 grants totaling $5,100,000 for research, according to Basil O'Connor, president of the National Foundation.

The new program grants include launching of new arthritis study centers in Dallas, Rochester, N. Y., and San Francisco, and a new birth defects center at Columbus, Ohio.

The grants also included research projects in scientific institutions across the nation, with the objective of eventually finding the cause, cure, and prevention of these crippling conditions.

Considerable interest developed in a potential new polio vaccine—based on the "live-virus" principle. The Salk vaccine now in general use utilizes the "killed-virus" technique.

The summer polio flareup, extending into the fall in some communities, brought an over-all increase of 75 per cent in paralytic polio cases over 1958. Health authorities blamed the epidemics directly on failure of millions of Americans to take advantage of the Salk vaccine. Because of the heavy load of new cases, plus thousands of patients from former years, some $16,500,000 was required for assistance to polio patients.

Blue Shield Plans for Aged

Only eight of the 67 Blue Shield Plans located in the United States, with only 2 per cent of total Blue Shield membership have no programs for senior citizens in the works at the present time, according to John W. Castellucci, executive vice-president of the National Association of Blue Shield Plans.

The remaining 59 plans either have special aged programs already being offered in their areas, or have programs in various stages of development.

The statistics are in response to a special survey just completed to determine the progress made by Blue Shield Plans since the passage of the AMA resolution last December 4 calling for the development of medical care coverage for the aged by voluntary means.

Specifically, the study conducted by the national Blue Shield association showed that 32 of the plans, representing more than 50 per cent of the total enrollment, have made available nongroup programs for persons over the age of 65. Three plans with about 15 per cent of total Blue Shield membership, have programs already approved and ready to be offered as soon as the mechanics of administration are completed. Also, 23 additional plans, covering 30 per cent of total enrollment, have senior citizen programs in various stages of development, and these plans report that they expect their programs to be in force early in 1960. In Texas a special offering to older persons was emphasized by Blue Cross in October.

General Practitioner's Role In Tuberculosis Control

It should not be necessary to point out the continued existence of a formidable tuberculosis problem in Texas. There are few counties which can boast of a low tuberculosis incidence. The general practitioner continues to be a keystone in the control program of this disease as with any other public health menace.

Certainly, the first item in control of tuberculosis is case finding. It falls the duty of the general practitioner annually to fill out many school physical examination forms and certifications that teachers are free of contagious disease. This is an excellent opportunity to check for tuberculosis with an intradermal or patch test or chest x-ray.

When an active case of tuberclosis is found, hospitalization should be recommended until the patient undergoes sputum conversion. There are several adequate facilities throughout the state, not only state sanatoriums, but in several communities, hospitals for tuberculosis operated privately as well as by the cities and counties. Because the hopsitalization and treatment course is prolonged, the patient needs to understand fully his problem and gain early a "stick to it" attitude until he conquers his disease.

The contacts of the person with active tuberculosis bear close watching for the next few years until the tuberculosis has been determined inactive. At present most new cases are uncovered in this contact group.

Finally, the general practitioner, particularly so in the rural areas, must assume the position of health counselor in his community. He should lend his support to those groups actively combating disease such as the local tuberculosis association, the public health authorities, industry, and school boards. In several states, including our neighboring state of New Mexico, a tuberculin test, and when positive an x-ray, are required of the teachers before the school term. Such a project could well be recommended to our local school boards. Finally, make one's self available for the discussion of health problems to Parent-Teacher Association groups, church organizations, and others.

—Committee on Tuberculosis,
Texas Medical Association.

Texas "Survival Plan" Said to Be Sound

The Texas "survival plan," regarded nationally as a model one, is described in the current issue of *Public Affairs Comment,* published by the University of Texas Institute of Public Affairs. This includes health aspects of survival, which in Texas are coordinated through the State Department of Health.

"Civil Defense Planning in Texas" is explained by Miss Mattie E. Treadwell, Office of Civil and Defense Mobilization federal coordinator at Austin.

"An attack—if it came tomorrow—might find planning only beginning in some areas, but the state and city plans that do exist would be found sound and immediately operable based as they are upon the solid foundation of the responsibility of existing governments," said Miss Treadwell.

Miss Treadwell says the Texas plan is "one of the most economical in the nation, chiefly because of the Texas system of government responsibility."

The article summarizes the state plan and those of seven major "target areas" in Dallas, Fort Worth, Houston, Austin, San Antonio, Galveston, and Beaumont-Port Arthur.

Texas Internist Named Component Of National Internist Group

The Texas Society of Internal Medicine was accepted recently as a component of the American Society of Internal Medicine.

The society, which was organized in December of 1958, has as its purposes to unite the qualified internists of the state in a representative organization for the furtherance of the practice of internal medicine; to study the scientific, economic, social, and political aspects of medicine in order to secure and maintain the highest standards of practice in internal medicine; and to cooperate with other organizations of like purposes.

Secretary-Treasurer of the Texas Society of Internal Medicine, Dr. Leonard J. Flohr of Dallas (left), is pictured receiving a certificate from Dr. Elbert L. Persons (right), president of the national society, when the society was accepted as a component of the American Society of Internal Medicine recently.

The original officers of the society are as follows: Dr. W. W. Bondurant, Jr., San Antonio, president; Dr. Jesse Hofer, Houston, vice-president; and Dr. Leonard Flohr, Dallas, secretary-treasurer. The society's annual meeting was held in conjunction with that of the Texas Academy of Internal Medicine, December 4-5, in San Antonio.

New society officers are Dr. David Carter, Dallas, president-elect, and Dr. Leonard J. Flohr, Dallas, secretary-treasurer. Dr. DeWitt H. Hotchkiss, Houston, became president.

Academy officers serving since December are Drs. Robert Mitchell, Plainview, president; H. Grady Bevil, Beaumont, vice-president; Sam Arnett, Lubbock, secretary-treasurer; and H. T. Engelhardt, Houston, president-elect.

Colgate Enters Ethical Drug Field

The Colgate-Palmolive Company and Lakeside Laboratories, Inc., have announced that an agreement has been made for Colgate to acquire Lakeside Laboratories, Inc., in exchange for Colgate stock. This acquisition marks Colgate's entry into the ethical drug field.

Exhibits From Gastroenterology, AMA Meetings in Film Series

Outstanding exhibits from the 1958 meetings of the American Medical Association and the World Conference of Gastroenterology are featured in Issue III of "Exhibits-on-Film," a service of Lakeside Laboratories, Inc. The filmstrips are available to all medical colleges and county, state, and regional medical societies free of charge.

The series is designed to provide medical students and physicians throughout the nation with the opportunity to view for themselves a selection of distinguished medical exhibits at the major conventions. Issue III of "Exhibits-on-Film" includes three filmstrips.

The filmstrips may be obtained by writing Helen Martin, Executive Secretary, "Exhibits-on-Film," Lakeside Laboratories, Inc., 1707 East North Avenue, Milwaukee 1, Wis.

Academy of Arts and Sciences Sponsors Monograph Prizes

The American Academy of Arts and Sciences again is sponsoring its Monograph Prize Program in 1960. Three $1,000 prizes will be awarded to the authors of unpublished monographs—one each in the fields of the humanities, social sciences, and physical and biological sciences.

A monograph is defined for the purposes of these awards as a "scholarly contribution to knowledge, too long for an article in a learned journal and too specialized for a general book." Recipients of these prizes will be expected to make their own arrangements for publication. The final date in 1960 for receipt of manuscripts by the committee on awards is October 1. Announcement of the awards will be made in December.

Full details concerning these prizes may be secured on request by sending a stamped self-addressed envelope to the Committee on Monograph Prizes, American Academy of Arts and Sciences, 280 Newton Street, Brookline Station, Boston 46.

Medical Officers Get Pay Raise

The United States Civil Service Commission announced recently it has authorized federal agencies to increase the entrance pay rates for classification act medical officer positions in all specializations to the top salary steps in grades GS-11 through 17. The new rates became effective in November for both present employees and new ones in more than 1,400 medical positions throughout the government.

The action was taken because the government was unable to obtain needed physicians to fill these jobs at former pay rates and was experiencing acute shortages in several agencies. It will result in pay raises totaling an estimated $720,840.

New Head for College of Physicians

The American College of Physicians' Board of Regents has announced the appointment of Dr. Edward C. Rosenow, Jr., of Los Angeles as the executive director of the college, beginning January 1. He will succeed Edward R. Loveland, who retired December 31, after nearly 35 years of service as executive secretary of the college.

Dr. Rosenow formerly was executive director of the Los Angeles County Medical Association and clinical professor of medicine at the University of Southern California, University of California School of Medicine, and the College of Medical Evangelists, Los Angeles.

Dr. Peavy Accepts Appointment As Commissioner of Health

Dr. J. E. Peavy of Austin was apointed December 13 to the position of commissioner of health for the State Department of Health to fill the unexpired term vacated by Dr. Henry Holle. Dr. Peavy had been serving as interim commissioner of health since April.

Before that time, he was director of the Division of Communicable Diseases of the Department of Health. He has been with the department for 20 years. He received his doctor of medicine degree from Baylor University College of Medicine in Dallas in 1935. He is certified by the American Board of Preventive Medicine.

CORRECTION: TONSILS AND POLIO

The attitude of the State of Washington Department of Health toward elective nose and throat surgery during epidemics of poliomyelitis has been clarified by the chief of the Division of Epidemiology, Dr. W. R. Giedt of Seattle.

In commenting upon a statement in table 1 of the article "Tonsils—Take Them or Leave Them" by Dr. Homer B. Field published in the April, 1959, *Texas State Journal of Medicine* (page 261), Dr. Giedt says that the official view in Washington might be more properly summarized as: "No general directive or regulation. Upon specific request, a recommendation might be made to postpone elective nose and throat surgery during an active epidemic."

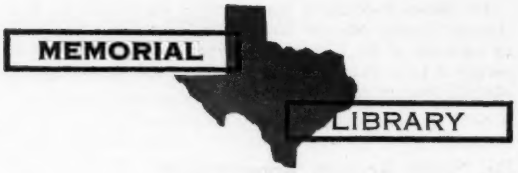
Drug Addicts Now Younger

Drug addiction may no longer be as widespread as it once was, but its victims today are much younger than before according to the September issue of *Patterns of Disease*, published by the Parke, Davis & Company for the medical profession. The publication traces the decline of drug addiction from an all-time high of 195,000 in 1915 to 70,000 about 20 years ago to its present low level of 46,000. Where the addict of 20 years ago was bordering on middle age, however, he is today "probably a male in his middle 20's who has been addicted to heroin since he was about 20," says the publication.

Proctology Academy Sponsors Contest

The International Academy of Proctology is sponsoring its annual cash prize and certificate of merit award contest for 1959-1960. The best unpublished contribution on proctology or allied subjects will be awarded $100 and a certificate of merit.

All entries are limited to 5,000 words, must be typewritten in English, and submitted in five copies. All entries must be received by February 1. They are to be addressed to Dr. Alfred J. Cantor, International Academy of Proctology, 147-41 Sanford Avenue, Flushing 55, N. Y.



TMA Library Report

The statistical report for the Memorial Library of the Texas Medical Association shows an increase in the usage by the membership. It is the desire of the library staff that more members will avail themselves of the services offered by the library.

Several new films have been added during the past year and more will be available in the coming months. Films are available for showing to local medical, auxiliary, and lay groups, as well as for personal use. Film listings may be secured by writing the Memorial Library, Texas Medical Association, 1801 North Lamar Boulevard, Austin.

The 1959 library report follows:

Circulation

	1958	1959
Reprints	14,542	17,140
Journals		
Single	7,384	7,458
Bound	909	1,215
Books	1,197	1,304
Total	24,032	27,117

Reference Requests and Films

Requests	3,048	3,199
Films	993	1,148
Inter-Office	No Record	99
Photostats of material borrowed		102
Bibliographies		36

Gifts from Texas Medical Association Members

Journals	8,833
Books	1,726
Reprints	267
Pamphlets	19
Bound journals	15
Instrument case	1
Record	1
Total	10,862

Gifts to the Library

Mrs. J. W. Ward, Greenville, 39 journals and 5 books.

Dr. James O. Chambers, Fort Worth, 200 journals and 128 books.

Dr. William P. Morgan, Austin, 290 journals.

Dr. Allen H. Neighbors, Jr., Austin, 118 journals.

Dr. Georgia F. Legett, Austin, 42 journals.

Dr. G. K. Womack, Austin, 70 journals and 3 bound journals.

Dr. Robert W. Loveless, Bastrop, 25 books.

Dr. Hyman J. Kaplan, Beaumont, 16 books.

★ Books

Books Newly Acquired

Anderson, Miles H.; Bechtol, Charles O.; and Raymond E. Sollars: *Clinical Prosthetics for Physician and Therapists,* Springfield, Ill., Charles C Thomas, 1959.

Bonica, John J.: *Clinical Application of Diagnostic and Therapeutic Nerve Block,* Springfield, Ill., Charles C Thomas, 1959.

Boyd, William: *Pathology for the Physician,* ed. 6, Philadelphia, Lea and Febiger, 1958.

Feldman, Sandor S.: *Mannerisms of Speech and Gestures in Everyday Life,* New York, International University Press, 1959.

Guttmacher, Alan F.: *Babies by Choice or by Chance,* Garden City, N. Y., Doubleday, 1959.

Johnson, Harry J.: *Guide to Better Health,* Englewood-Cliffs, N. J., Prentice-Hall, 1959.

Katz, Louis N.; Jeremiah Stamler; and Ruth Pick: *Nutrition and Atherosclerosis,* Philadelphia, Lea and Febiger, 1958.

Lewin, Phillip: *Foot and Ankle,* ed. 4, Philadelphia, Lea and Febiger, 1959.

Lotspeich, William D.: *Metabolic Aspects of Renal Function,* Springfield, Ill., Charles C Thomas, 1959.

Stowens, Daniel: *Pediatric Pathology,* Baltimore, Williams and Wilkins, 1959.

Quimby, Edith H.; Sergei Feitelberg; and Silver, S.: *Radioactive Isotopes in Clinical Practice,* Philadelphia, Lea and Febiger, 1958.

Stevenson, George, and Milt, Harry: *Master Your Tensions and Enjoy Living Again,* Englewood, N. J., Prentice-Hall, 1959.

Voisin, André: *Soil, Grass and Cancer, Health of Animals and Men Is Linked to the Mineral Balance of the Soil,* New York, Philosophical Library, 1959.

Watkins, Arthur L.: *Manual of Electrotherapy,* Philadelphia, Lea and Febiger, 1959.

Book Notes

Action of Radiation of Tissues; An Introduction to Radiotherapy

A. LACASSAGNE, Chief of Service of Pasteur Institute, Director of the Radium Institute (Biological and Therapeutic Sections), and G. GRICOUROFF, Chief of the Laboratory of the Curie Foundation (Radium Institute). Translated by Clarence C. Lushbaugh, M. D. and Gretchen R. Riese, M.S., Los Alamos Scientific Laboratory, University of California. ed. 2. 199 pages. $6.25. New York and London, Grune and Stratton, 1958.

This valuable little book presents to the reader a summary of the significant worldwide contributions to the field of experimental radiophysiology, correlating them with clinical and histologic observations of the effects on man.

It was originally published in French in 1941, and has since been revised and translated into English. Ideas on the biological action of radiation locally and to large areas of the body complete with clinical and histological observations are presented. Individual organs and areas are discussed separately. The bibliography is complete.

This book should be helpful to students of the subject and also to the practicing physician who will need this information more and more as the atomic age develops.

—R. N. Snider, M.D., Austin.

Diagnostic Medical Parasitology

EDWARD K. MARKELL, Ph.D., M.D., and MARIETTA VOGE, Ph.D., Assistant Professors of Infectious Diseases, Division of Parasitology and Tropic Diseases, Department of Infectious Diseases, School of Medicine, University of California, Los Angeles. 276 pages. $7. Philadelphia and London, W. B. Saunders Company, 1958.

This book is an excellent combination of textbook and laboratory manual. It is designed primarily for medical students and would be suitable when parasitology is presented as an independent course or when it is integrated with other subjects in which infectious agents are considered in relation to organ systems. It also will be of great value to the laboratory technologist in training.

Some of the sections found in this book include the following: stool examinations; intestinal protozoa and helminths; parasites of the blood, genitourinary tract, and tissues; arthropods; pseudoparasites; special diagnostic methods; and stains. The photographs and drawings in the book are outstanding; those dealing with malaria are in color. There are keys to intestinal helminths and microfilarias given, and there also is an index.

The Care of the Geriatric Patient

E. V. COWDRY, Ph.D., Sc.D. (Hon.), Director of Wernse Cancer Research Laboratory, Washington University School of Medicine; Chairman of the Medical and Scientific Committee, American Society for the Aged, Inc. 438 pages. $8. St. Louis, C. V. Mosby Company, 1958.

This is an important addition to the growing references on geriatric medicine and care. The first five chapters are an outgrowth of a symposium on the care of geriatric patients held by the Los Angeles County Medical Association in 1955. These papers dealt with the psychological, medical, and surgical aspects of old age care. To these are added chapters on other specialties. Each contributor is an authority. The chapters on nursing homes, care of the patient in his home, and rehabilitation are particularly outstanding and timely. They should be helpful to community groups and committees organized for geriatric care. The emphasis is placed on what can be done by the physician today to meet the particular needs of the old person.

The Care of the Patient In Surgery Including Techniques

EDYTHE LOUISE ALEXANDER, R.N., B.S., M.A., Director of Nursing Service and Principal of the School of Nursing, Lutheran Medical Center, Brooklyn, N. Y. ed. 3. 840 pages. $12.75. St. Louis, C. V. Mosby Company, 1958.

This is an excellent book concerned primarily with operating room procedures and armamentarium. It is of particular value to the young surgeon and nurse. The book contains many excellent drawings and photographs which greatly add to the over-all excellence of the book. It is highly recommended to all persons interested in surgery and, especially, to those who provide and maintain the sterile conditions necessary for the success of any operation.

So You Have Glaucoma

EVERETT R. VEIRS, M.D., Chief of Ophthalmology, Scott and White Clinic, Temple. 64 pages. $2.75. New York and London, Grune and Stratton, 1958.

This book by Dr. Veirs is a comprehensive and noteworthy achievement in many ways.

In the first place, it conveys a considerable array of technical information in the simplest terms understandable by the layman for whom the book is intended, and presumably given free to Dr. Veirs' patients. The book is about the chief of the blinding diseases, glaucoma, found in 2 per cent of all persons over 40, of whom only one-fourth are getting eye care. In our rapidly growing incidence of the aged, this fact merits special attention and early diagnosis. Therefore, patient's cooperation is stressed.

Secondly, salient and up-to-date facts about anatomy, physiology, pathology, and treatment of glaucoma are presented in a succinct and well organized manner, and such difficult topics as ophthalmoscopy, visual fields, gonioscopy, and tonography are adequately explained.

Thirdly, this book meets the growing challenge for better public relations on our physicians' part. Of course, partly the public is to blame for not supporting medical education adequately so that more and better distributed medical care is available to it. We physicians fail to do our share in the matter of taking the patient into our confidence about his ailments. We fail to give due consideration to the fact that our patients often are anxious, confused, and bewildered sufferers, who sometimes have to wait needlessly long in our waiting rooms. Because we are hurried, the patient hesitates to ask questions and gets inadequate explanations from us about his troubles and the procedures we use. In desperation, he turns to quacks and charlatans and magazines and newspapers for his information which is often inaccurate.

This is a well accomplished task.

—Morris Davidson, M.D., Austin.

A History of Neurology

WALTHER RIESE, M.D., Associate Professor of Psychiatry and Neurology; Associate Professor of the History of Medicine, Chairman of the Department of the History of Medicine, Medical College of Virginia, Richmond. Foreword by Felix Marti-Ibanez, M. D., Editor-in-Chief of MD Medical Newsmagazine. 223 pages. $4. New York, MD Publications, Inc., 1959.

One has only to scan through the 175 references in the bibliography of this book to appreciate the amount of work that has gone into the compilation of this book. The treatment of the early history in such a manner as to make it interesting and to tie it in with our modern concepts was done in a skillful manner.

More illustrations would have added to the interest of the book, but it also would have added materially both to size and cost of the publication. The most helpful feature in the book is the neurological chronology tying together periods with specific people and their relation to the governments, culture, and general developments affecting the times in which these people lived. Some of the periods covered were the Roman Empire, Renaissance, French Revolution, and American Revolution. The French Revolution, for example, gave birth to the idea of citizenship, philosophy of disease, therapy, hospital care, and the first formulation of the rights and duties of the mentally sick. In our own American Revolution, Benjamin Rush was a powerful representative of early American psychiatry, and he was a great boon to its development.

It was interesting to see how Galen (130-210 A.D.) distinguished between sensory and motor nerves, and he knew that transection of the cord would destroy both motor and sensory functions below this level, but he still failed to distinguish between the motor functions of the anterior roots and the sensory functions of the posterior roots of the spinal cord. It remained for Francois Magendie (1783-1855) to discover that the posterior roots were sensory and that the anterior roots were connected with movement or motor effects.

Pierre Paul Broca discovered the centers of speech and was the first to localize speech in the posterior part of the third frontal convolution of the left hemisphere. He was

followed by Carl Wernicke, who extended the understanding of localization of lesions in cases of aphasia.

Comparative neurology did not become a reality until Edinger Ludwig (1855-1918) adopted a Darwinian scheme and classification of cerebral structures which he divided phylogenetically into old and recent ones and enunciated a theory of nervous diseases due to wear and tear.

The closing of this review pays homage to our own Harvey Cushing (1864-1939), for he took the accumulated knowledge of neuroanatomy and neuropathology and concurrently with Fedor Krause added neurosurgery. Thus he expanded the knowledge of both neuroanatomy and pathology to the point of systematic and comprehensive classification of brain tumors with the practical application of clinical prognosis. It was through this work that Conheim developed the thesis that the more immature a given tissue the more malignant it will be. In recent years, the work on parkinsonism has added another historical accomplishment. Many more avenues of study and progress are in being, but the reviewer is acutely aware that proper evaluation must stand the test of time for accurate estimates of their worth. For those who like to know where we have been and get a glimpse of where we are going, this book is worth while and interesting to read.

—Joe C. Rude, M. D., Austin.

Maternity

FREDERICK W. GOODRICH, JR., M.D., 130 pages. $1.75. Englewood-Cliffs, N. J., Prentice-Hall, Inc., 1959.

Designed as a supplement for her doctor's care, this small handbook will give the expectant mother a better understanding of pregnancy and childbirth. Dr. Goodrich discusses the prospective mother's emotional adjustment to pregnancy, her first visit to the doctor, the physical examination, and what she should know about the Rh factor.

He gives a brief description, with diagrams, of the development of the baby, a summary of arguments for both breast feeding and bottle feeding, advice on some of the problems of pregnancy, as well as valuable information on how to distinguish between ordinary symptoms of pregnancy and real danger signals which should be reported to the doctor.

The concluding chapter is addressed to the husbands and stresses some "do's" and don't's" that they should follow. The style of the book is natural and the advice presented is in simple, concise terms as if the author were talking directly to the reader.

Textbook of Pediatrics

Edited by WALDO E. NELSON, M.D., D.Sc., Professor of Pediatrics, Temple University School of Medicine; Medical Director of Saint Christopher's Hospital for Children. ed. 7. 1462 pages. $16.50. Philadelphia and London, W. B. Saunders Company, 1959.

Dr. Waldo E. Nelson is considered one of the outstanding pediatricians in the world today. He is eminently qualified to edit such a textbook as this. This textbook has been used in a majority of the medical schools in teaching programs. It is in constant use by pediatric interns and residents, and no pediatrician would attempt to practice pediatrics without having this authoritative book close by for reference. The editor and the contributors have made a noble effort again in this seventh edition to serve the student and practitioner in a more complete understanding of medical problems dealing with infants and children.

There are completely new chapters by new contributors, or new hands working with authors of the preceding editions which deal with the following subjects: clinical appraisal of infants and children, parenteral fluid therapy, drug therapy, anesthesia, prenatal rickettsial diseases, mycotic infections, the respiratory tract, the nervous system, convulsive disorders, cerebral palsy, and orthopedic pediatrics. In addition, there are several new sections including tropical eosinophilia, kala-azar, cirrhosis of the liver in Indian children, pulmonary ventilation in health and diseases, behavior problems assoicated with organic brain damage, and the physician and the child with a handicap. Throughout the book there has been a "word-by-word" revision or reappraisal.

This new edition is certain to warrant coninued use by the medical profession.

—Donald H. McDonald, M.D., Abilene.

Chemistry of Blood Coagulation

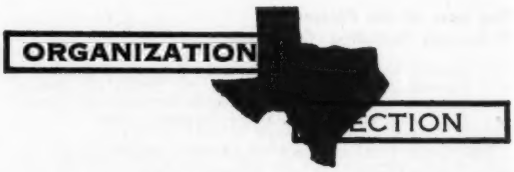
PAUL MORAWITZ, Marburg. Translated by Robert C. Hartmann, M.D., and Paul F. Guenther, M.A., Ph.D., from the Departments of Medicine and German, Vanderbilt University, Nashville, Tenn. 194 pages. $4.50. Springfield, Ill. Charles C Thomas, 1957.

This is a book of the recent advances in the field of blood coagulation and should be of value as background material. The glossary explains part of the terminology now obsolete and the 42 page bibliography gives a picture of the various theories developed on coagulation in the late nineteenth and early twentieth centuries.

Ideals in Medicine

VINCENT EDMUNDS, M.D., M.R.C.P., and C. GORDON SCORER, M.B.E., M.D., F.R.C.S. 192 pages. $3. Chicago, Christian Medical Society, 1958.

Dr. Edmunds and Dr. Scorer along with 11 other contributors have created a book especially directed to the final year students in medicine and younger qualified men in this field. Some of the topics discussed include the outlook of the Christian, matters of personal standards, relationship of the family doctor to his patients, ethical problems in medical practice, and the satisfaction which a doctor derives from his work.



★ American Medical Association

Dallas Rests After Duties As Host to AMA Session

A total of 5,827 persons attended the first American Medical Association clinical session ever to be held in Dallas, December 1-4. Of these 2,817 were physicians and 3,010 guests.

Special features of the meeting were the first national conference on the medical aspects of sports, a day long program on the effect of sunlight on skin, a special trans-Atlantic audio conference between physicians here and in Glasgow, Scotland, closed-circuit color television broadcasts,

Doctors enjoyed the chili and tamales at the Southwestern Hospitality Suite, courtesy of the Austex Foods, Inc., of Austin.

a presentation by Dr. Hubertus Strughold, professor of space medicine at the School of Aviation Medicine, Randolph Air Force Base, and a record number of industrial and scientific exhibits displayed in the Memorial Auditorium.

More than 200,000 visitors attended the week long Dallas Health Fair held November 29-December 6—the largest health fair to be held in the United States and the second to be held in conjunction with the clinical meeting of the American Medical Association. It was sponsored by the Dallas County Medical Society and was open to the public.

Aims of the fair were (1) to present factual health information to the public; (2) to attract young people to careers in medicine and allied fields; and (3) to promote closer relationship between physicians and patients.

Some 150 exhibits prepared by the AMA, allied health groups, and voluntary health agencies were on display. One of the largest was a walk-through exhibit depicting the varied departments and personnel which make up the modern hospital.

Highlights of the meeting for the women attending were a luncheon and Neiman-Marcus style show honoring the presidents of the AMA and the Woman's Auxiliary and a concert by the Dallas Symphony played for all visitors at the clinical meeting as a memorial to the late Dr. E. H. Cary of Dallas.

Texans were proud to have a part in the Southwestern Hospitality Suite, located in the Skyway Suite of the Adolphus Hotel, open December 1-3, from 11:30 until 2 p.m. In addition to Texas, other sponsors of the suite were the Arizona Medical Association, Arkansas Medical Society, Louisiana State Medical Society, New Mexico Medical Society, and Oklahoma State Medical Association.

At the suite, a buffet luncheon for the delegates was served each day featuring specialty foods from each state. Texas treats included hot tamales and chili furnished by Austex Foods, Inc. and fresh orange and grapefruit juice and 5 pound bags of grapefruit courtesy of the Citrus Industry of Texas.

Texas was one of the co-sponsors for a hospitality hour December 2, after which Texas delegates played host to other delegates and their wives at a banquet, co-sponsored by Blue Cross-Blue Shield. Entertainment, which included a western band complete with singers and dancers, was furnished by the Charles O. Finley and Company, which provided the same entertainment for the Medical Executives dinner. Merck, Sharp & Dohme provided favors for the delegates dinner.

House of Delegates Reaffirms "Free Choice"

Resolutions introduced by Texas delegates on the subjects of free choice of physician, relative value studies, relationships between physicians and hospitals, and international medical research figured prominently in the American Medical Association's House of Delegates at its December, 1959, meeting in Dallas.

The 1959 clinical meeting marked the induction of a Texas delegate, Dr. Milford O. Rouse of Dallas, as vice-speaker of the House.

Texas delegates presented five resolutions at Dallas, including four that were adopted by the Executive Board of the Texas Medical Association in September, 1959.

A Texas resolution supporting the principle of bilateral free choice in all plans of medical care was one of four introduced on the general subject. The House of Delegates subsequently clarified and strengthened its position on the issue by stating "unequivocally that the American Medical Association firmly subscribes to freedom of choice of physician and free competition among physicians as being prerequisites to optimal medical care." The House further pointed out that "the benefits of any system which provides medical care must be judged on the degree to which it allows of, or abridges, such freedom of choice and such competition."

Twelve resolutions, including one from Texas, were presented on the subject of relationships between physicians and hospitals. The objective of the Texas resolution was achieved when the House affirmed the 1951 guides to "Relationships between Physicians and Hospitals," and declared that all subsequent or inconsistent actions were considered superseded.

The House of Delegates reworded a Texas resolution which cited the fact that the dissemination of information on relative value studies is an educational project only with no endorsement and stipulated that each state and county society should be free to consider it or not. The Texas resolution pointed out that medical societies considering these studies should be fully cognizant of possible eventual use of relative value schedules by third parties in establishing fixed fees.

The action of the House of Delegates approved in principle the conducting of relative value studies by each state medical association, rather than by nationwide or regional studies by the AMA, and authorized its Committee on Medical Practices to assist those states desiring to undertake the studies.

The House also gave favorable attention to another Texas resolution endorsing the principle of medical research by

Senator Lyndon B. Johnson (left) of Texas and Representative Sam Rayburn (center), speaker of the House of Representatives, were greeted at the American Medical Association's Clinical Session by Dr. E. Vincent Askey (right), President-Elect of the association.

any individual organization that has adequate funds and personnel, but opposing a measure before the eighty-sixth Congress, H. J. R. 41, which would institute a federal program of international medical research at an initial cost of $50,000,000. The Texas resolution opposed H. J. R. 41 "as being unnecessary, impractical, and undesirable as a new avenue of foreign aid."

The AMA House subsequently voted to take no action for approval of this legislation until an over-all assessment can be made of proposals which presently are before Congress dealing with domestic and international medical research.

No action was taken on a fifth Texas resolution which asked the American Medical Association to go on record as approving H. J. R. 23, eighty-sixth Congress. H. J. R. 23 proposes an amendment to the Constitution of the United States relative to abolishing personal income, estate, and gift taxes, and prohibiting the United States government from engaging in business in competition with its citizens. Though no action was adopted on that resolution, the AMA House of Delegates did reaffirm action taken in 1952 "favoring an amendment to the Constitution of the United States limiting the taxing power of the Federal government."

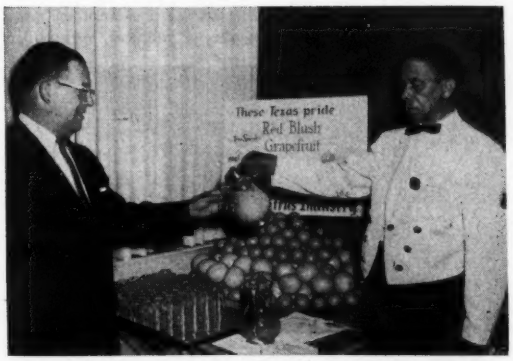
AMA's House of Delegates approved a special committee to prepare a scholarship program for medical students and to study other aspects of medical education.

The House recommended that the special committee be given a staff and funds so that it can make its first report at the 1960 annual meeting. The committee was asked to "present a scholarship program, its development, administration and the role of the American Medical Association in fulfilling it."

Speaking at the opening session of the House were two nationally known political leaders from Texas. Senator Lyndon B. Johnson, majority leader in the United States Senate, called for a "politics of unity" which will enable Americans to exert strength and determination in an effort to create a world in which all men can be free. Speaker of the United States House of Representatives, Sam Rayburn, urged greater attention to the task of educating young people in the principles of American government and giving them a desire to perpetuate it.

Also, speaking at the Tuesday morning session of the House was Dr. Louis M. Orr, Orlando, Fla., AMA President, who urged the nation's physicians to take a more active interest in the whole area of politics, public affairs, and community life. Dr. Orr also asked physicians and medical societies to do a more effective job of telling medicine's positive story, adding that "if more people knew more about the things we support and encourage, they would listen to us much more carefully about those occasional things that we oppose."

Dr. Chesley M. Martin of Elgin, Okla., was named the 1959 General Practitioner of the Year for his outstanding contributions to the health and civic affairs of his home community. Dr. Martin, who has practiced in Elgin for the past 44 years, was the thirteenth recipient of the annual award and the first Oklahoman to be so honored.



Fresh orange and grapefruit juice was supplied at the Southwestern Hospitality Suite by the Citrus Industry of Texas. Other states sponsoring the suite included Arizona, Arkansas, Louisiana, New Mexico, and Oklahoma.

Texans Help Write "AMA News"

The *AMA News,* the biweekly newspaper published by the American Medical Association and now starting its second year of publication, at present has five correspondents in Texas.

These correspondents cover the key sources of medical information in this state for the newspaper. Blair Justice of the *Fort Worth Star-Telegram* began working for the *AMA News* when the first issue was published September 22, 1958. Since that time, four other correspondents have been added in Texas. They are Miss Helen Bullock of the *Dallas Morning News;* Miss Marjorie Clapp of the *San Antonio Light;* Tom Thorpe of the *Houston Chronicle;* and Mrs. Laura Reesby of the Galveston *Daily News* and *Tribune.*

All the correspondents have experience in the field of medical reporting and have the approval of the Texas Medical Association.

★ Woman's Auxiliary

Accident Problem Is Auxiliary Project

Accidents with injuries occur at the rate of

1 every 3 seconds
1,100 every hour
26,300 every day
184,500 every week
9,600,000 every year

"Accidents will happen!" Two hundred or more accidents occur every 10 minutes, and of these, two will have fatal consequences. Unless the pattern is changed in 1960, our injury-fatality record from accidents will be the highest we have ever had.

That is why the Woman's Auxiliary to the Texas Medical Association has taken a hand in accident prevention. It considers the problem as part of its program of health education, the solution as part of its public relations or community service.

The accident problem may be described as

Physical: conditions of roads, vehicle and equipment maintenance, rules and regulations.

Intellectual: understanding traffic, comprehending the need for public and personal controls.

Psychological: behavior, attitudes, motivations of individuals and groups.

Sociological: complex living conditions in urban centers, changing modes in transportation.

Spiritual: reverence for life, individual respect for others.

Medically, the problem is salvage: emergency medical care, human repair.

The Auxiliary's Committee on Safety has pointed the way to various avenues for accident prevention study—personal, in the home, in relation to children, about traffic, and in the community—making use of a variety of tools such as motion picture films and pamphlets.

Furthermore, the Auxiliary's safety program is related to other Auxiliary activities and can be promoted in conjunction with them. For example:

Public relations and/or community service: community health and safety, driver education, poison control centers.

Legislation: driver license law, better traffic courts, drinking driver problem.

Annual physical examination: physical fitness, good vision, personal health card for information on drivers.

Civil defense: first aid, sanitation and health measures necessary in disaster, supplies.

Mental health: maturity, attitudes of courtesy and cooperation, respect for the other driver.

Recruitment: GEMS (trained baby sitters), careers in research.

Science fair: projects in traffic and home safety, disaster protection, cars of the future.

The Auxiliary is inviting others interested in safety to join in an around the calendar observance of accident prevention with an appropriate topic and tip for each month. January brings winter and weather hazards—"Weather conditions do not cause accidents. Guess who?" February is for motor manners—"Put *heart* into your driving." As the year goes by, June brings vacation safety—"We take our accidents with us." Finally at year's end is November with pedestrian safety—"Don't learn safety by accident," and December's holiday safety—"Don't be a Scrooge with safety; share it!"

Just as every member of the Woman's Auxiliary is invited to share in this safety effort, so are members of the Texas Medical Association, every month of the year 1960.

—MRS. EMMETT ESSIN, Sherman,
Safety Chairman, Woman's Auxiliary
to Texas Medical Association.

★ County Societies

County Society Briefs

Dr. F. J. L. Blasingame, executive vice-president of the American Medical Association in Chicago, formerly of Wharton, was guest speaker at a special meeting of the *Travis County Society*, December 7. Dr. Blasingame presented a summary roundup of significant items affecting medicine on the national scene. In addition to members of the society and their wives, invitations were extended to members of the Austin District Dental Society, District 7 of the Texas Medical Association, and the Texas Medical Association staff.

American medicine will always cure its own headaches best in the marketplace, not in political bills pouring out of Washington, according to Dr. Blasingame, who outlined the view of the American Medical Association.

"I don't trust any mechanism but competition," the AMA executive commented concerning the Forand Bill. "The bill does not solve the problem of medical care for our old people—it just makes it a political rather than medical issue."

"If the problem were 10 times as acute as it really is, it still would not justify this solution," Dr. Blasingame pointed out. "I think we can make a tragic mistake if we treat the aged as a group separated from society. Besides there are many older people who are not covered by social security and they are ignored completely by the bill."

Medical progress over the past 59 years has made the whole American Social Security outlook old-fashioned, the former Wharton physician said.

The *Dallas County Society* met in joint session with the St. Paul Hospital Medical Staff October 13 in the Medical Arts Building Auditorium in Dallas. Dr. Floyd A. Norman, president of the society, presided.

Dr. George Aldredge, Dallas, president of the St. Paul Medical Staff, made comments about the hospital. A scientific program on "Tuberculosis—New Problems and Diagnosis," was presented by Dr. Lynn C. Christianson, Dallas.

"On Call to a Nation," a portrayal of socialized medicine in England, was the program feature of the November 9 meeting of the *Potter-Randall Counties Society* in Amarillo.

A budget listing an income of $17,507.86 and an expenditure of $11,678.00 was adopted by the society. Both income and expenses include monies received and paid out for the Texas Medical Association and Panhandle District Medical Society dues.

The *Harris County Medical Society* met January 13 at the Jesse Jones Library auditorium for the installation of 1960 officers. Dr. R. W. Kimbro of Cleburne, chairman of the Board of Trustees of the Texas Medical Association, was the guest speaker. New officers of the society include Dr. Robert K. Blair, president-elect; Dr. Jasper Arnold, vice-president; Dr. Charles W. Klanke, secretary; and Dr. Lester Karotkin, treasurer; all of Houston. Dr. Wendell H. Hamrick, Houston, became president of the society.

Dr. Charles Pearre Hawkins of Fort Worth was awarded the *Tarrant County Society's* coveted gold-headed cane, December 15. Some 220 members of the society and guests at the ninth annual gold-headed cane banquet honored the physician, who has been practicing medicine in Fort Worth since 1920. The cane was presented by Dr. DeWitt Neighbors, last year's recipient.

Dr. Hawkins was cited for his long and honorable service to the community—the first 20 years as a general practitioner and since 1940 as a specialist in obstetrics and gynecology. He has been chief of staff at Harris Hospital, in addition to serving as head of the hospital's section of obstetrics and gynecology.

In presenting Dr. Hawkins to the society, Dr. Neighbors said, "The faith of our fathers has been a daily guide in his life. He is a sincere and dependable friend, an interesting companion, a devoted family man, a generous citizen of the community with his means and services."

State Attorney General Will Wilson was the principal speaker at the event. He urged the doctors present and their society to help keep down health costs. He cited today's problem "as the upward spiral of costs which daily drive the public to seek more governmental hospitalization."

"I would charge you today that the path of patriotism for you as a practitioner lies in assuming a greater responsibility for the cost of health," said Attorney General Wilson.

"More people in Texas ought to be encouraged to buy health and hospital insurance. The only way to do this is

to keep the premiums within reach. The only way to prevent a further expansion of governmental hospitalization and care is to keep health costs down," he said.

The *Tarrant County Society* met November 3 for dinner and a business meeting. The society voted to change the annual membership dues from $110 to $125. Dr. Hobart O. Deaton, chairman of the board of Trustees, spoke to the society briefly giving a run-down on the balance of the budget for the last several years.

★ Texas Medical Association

Fort Worth Hotels Accepting Annual Session Reservations

Hotels and motels in Fort Worth are accepting reservations for the annual session of the Texas Medical Association, scheduled for April 9-12. Requests for accommodations should be sent to the hotel or motel of choice, together with an indication of arrival and departure times, type of facility desired, and persons who will occupy the room and their position in relation to the Association or the session. The Fort Worth Chamber of Commerce will act as a clearinghouse for location of accommodations if the hotel or motel is already filled.

Committee meetings, the first meeting of the House of Delegates, and a few special events are set for Saturday, April 9. A number of specialty societies, reference committees and the House of Delegates itself, beginning activities of the Woman's Auxiliary, and memorial services will be featured on Sunday, April 10. Monday and Tuesday will be full of refresher courses, general meetings, section and specialty society programs, and motion pictures, with the final meeting of the House of Delegates Tuesday afternoon, alumni banquets Monday, fraternity parties and the President's party Tuesday night. Scientific and technical exhibits will be on display from Sunday noon through Tuesday, and the Auxiliary will have a full program beginning Sunday.

Headquarters for the Association will be Hotel Texas; for the Woman's Auxiliary, the Hilton Hotel. Scientific events will be held at both of those hotels and at the Worth Hotel. Bedrooms at Hotel Texas are being blocked out for reservations by guest speakers, delegates, and members of boards, councils, and committees until March 1, at which time any rooms remaining will be assigned on a first come, first served basis.

Dr. George Y. Siddons of Fort Worth, chairman, and Dr. J. M. Burnett of Fort Worth, co-chairman, head the local Hotels Committee, which is serving under the general supervision of the Committee on General Arrangements with Dr. Joseph H. Steger as chairman.

Hotels and motels suggested for use by Texas Medical Association visitors to Fort Worth, with addresses and twin bedroom rates, follow:

HOTELS

Hilton Hotel, 601 Main, $9.50-$12.50.
Holiday Inn Hotel, U.S. Highways 80 and 183 West, P. O. Box 12217, $11.
Loring Hotel, 3101 Camp Bowie, $7.50-$8.50.
Texas Hotel, 815 Main, $8.50-$16.
Westbrook Hotel, 408 Main, $7-$9.
Western Hills Hotel, 6451 Camp Bowie, $9 up.
Western Hills Inn, U.S. Highway 183 and F.M. 157, Box 356, Euless, $11 up.
Worth Hotel, 310 W. Seventh, $9.50-$11.

MOTELS

City Center, 3520 Camp Bowie, $8-$9.
Desert Village Motel, 6651 Camp Bowie, $9-$12.
Downtown Motel, 600 N. Henderson, $10-$12 (double).
Landmark Lodge, 7501 Bankhead Highway, $9.
Park Plaza Motel, 1815 E. Lancaster, $7-$13.50.
Rio Motel, 6600 Camp Bowie.

FACILITIES FOR NEGROES

Flint Hotel, 310 E. Thirteenth.
Ranch House Hotel, 910 Jones.
Reservations in private homes can be secured by writing the Housing Chairman, Texas Medical Association Annual Session, 700 Throckmorton, Fort Worth.

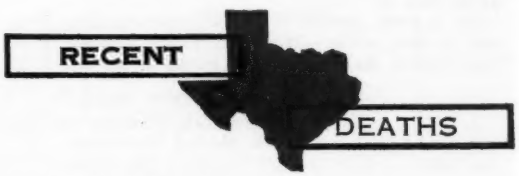
The Council on Annual Session and representatives of the scientific sections and related specialty organizations met in Fort Worth January 10 to make final plans for the annual session program. With an imposing slate of guest speakers committed for the program and the arrangements for other participants and events outlined at the January 10 meeting, the chairman of the council, Dr. L. Bonham Jones of San Antonio, predicts an exceptionally strong, attractive session.

Association Membership Directory To Be Completed in February

A hard back directory listing all members of the Texas Medical Association is being published by the Blue Cross-Blue Shield of Texas and the Texas Medical Association. It is scheduled to be completed by February. The book will be mailed free of charge to members of the Association.

The membership will be listed in two ways: the front section of the directory will contain an alphabetical listing of members and the back section will group members by cities. The front section will give the names of Association members, as well as their addresses, phone numbers, and specialties.

This is the third directory published by Blue Cross-Blue Shield of Texas listing the membership of the Association.



DR. JOHN B. SPILLER

Dr. John Browder Spiller, a Houston radiologist and clinical pathologist for the past 35 years, died October 31, 1959, after having a heart attack in his office.

Dr. Spiller was a member of the first graduating class of Rice Institute in 1916. In 1920 he received his doctor of medicine degree from the University of Texas Medical Branch at Galveston. He was born at Old Danville in Montgomery County December 18, 1893.

Dr. Spiller held memberships in various medical organizations. He was a member of the Harris County Medical Society, the Texas Medical Association, the Southern Medical Association, and the Radiological Society of North America. He also belonged to the Second Presbyterian Church, the Arabia Temple Shrine, and the Phi Beta Pi medical fraternity. He was a lieutenant colonel and bat-

DR. JOHN B. SPILLER

DR. EDMUND D. JONES

talion surgeon in the Texas State Guard Association and a veteran of World War I.

Members of the family who survive include his wife; a son, Dr. W. F. Spiller of Houston; five sisters, Mrs. Allie Smith and Mrs. Nat Davis, both of Conroe, and Miss Bess Spiller, Mrs. A. E. Garrott, and Mrs. Errol E. Tyree, all of Esperanza; two brothers, J. R. Spiller of Houston and Dr. William F. Spiller of Galveston; and one granddaughter, Jan Browda Spiller.

DR. EDMUND D. JONES

Dr. Edmund Dennis Jones, Beaumont, died October 23, 1959, of a heart attack.

One of the founders of the Texas Academy of General Practice, Dr. Jones was born at Starks, La., October 13, 1905. He attended South Park Junior College (now Lamar College) at Beaumont and Baylor University at Waco, and was graduated in 1935 from Baylor University College of Medicine at Dallas. After an internship at the Akron City Hospital at Akron, Ohio, Dr. Jones served a residency in surgery at this same hospital, was an interim resident in surgery at the Children's Hospital, also at Akron, and later did residencies in diseases of the eye, ear, nose, and throat at Wayne County General Hospital and at the William F. Seymour Hospital, both at Eloise, Mich. He began his practice of medicine at Beaumont in 1938, continuing until 1941, when he was enlisted in active military duty as a medical reserve officer. After returning to Beaumont in 1947, he was a company physician for Mobil Oil Company (then Magnolia).

Dr. Jones was a member of the Jefferson County Medical Society, the Texas Medical Association, the Texas Academy of General Practice, the American Medical Association, the Association of Military Surgeons of the United States, the American Academy of General Practice, Beaumont Academy of Medicine, and was a member of the board of directors of the Beaumont Municipal Hospital. Before coming to Texas, he had been a member of the Summit (Ohio) County Medical Society and the Ohio State Medical Association. He was a member of the First Baptist Church, a lieutenant colonel in the Army Reserves, and was a member of the board of directors of Boys' Haven.

The physician is survived by his wife, Mrs. Anne Donnelly Jones of Tucson, Ariz.; five sisters, Mrs. R. A. McCowen, Mrs. Lottie Morse, Mrs. Elton Tribble, and Mrs. Robert Brand, all of Beaumont, and Mrs. George W. Goings of Houston; and two brothers, H. Minor Jones of Beaumont and J. Kirby Jones of Port Arthur.

CORRECTION: DR. D. LEON SANDERS

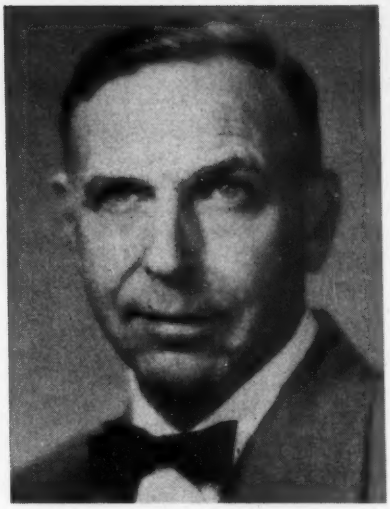
Dr. D. Leon Sanders of Wills Point, whose death was reported in the December issue of the *Journal*, page 985, died October 1, 1959, instead of October 8 as indicated previously. Dr. Sanders succumbed to hypostatic pneumonia, myocarditis and cardiac failure, arteriosclerotic heart disease, and chronic nephritis less than 3 hours before his eighty-eighth birthday. City health officer of Wills Point for 45 years, Dr. Sanders was secretary of the Van Zandt County Medical Society for 38 years.

DR. SALVADOR L. BOCCELATO

Dr. Salvador Leon Boccelato, San Antonio, was killed November 6, 1959, by his own automobile after pushing his wife from the path of the moving vehicle. The freak accident occurred on the steep driveway at the doctor's home, where his car was parked. Mrs. Boccelato was standing behind the automobile when it began rolling backward. Dr. Boccelato pushed his wife to safety but was caught under the car. He suffered a laceration of the brain with subarachnoid hemorrhage.

The son of Joseph and Josephine Boccelato, the physician was born on July 6, 1889, at New Orleans. His preliminary education was received at Memphis, Tenn., and in 1913 he was graduated from the University of Tennessee School of Medicine. He served an internship at St. Joseph's Hospital in Memphis. At the University of Tennessee, Dr. Boccelato was assistant teacher of anatomy and obstetrics. He practiced at Memphis from 1913 until 1925 and at Tampa, Fla., from 1925 until 1931 before going to San Antonio. He specialized in obstetrics and gynecology. Dur-

DR. SALVADOR L. BOCCELATO



Dr. G. NELSON FURBECK

ing World War I he served a year in Italy with the Army Medical Department.

Dr. Boccelato's memberships included the Bexar County Medical Society, the Texas Medical Association, the Southern Medical Association, and the American Medical Association. He was a Catholic, a 40 & 8 Chef de Gare, and a past commander of the American Legion. His leisure hours were spent reading histories and biographies. He was decorated in World War I with the Croix de guerre.

Survivors include his wife, the former Miss Rosary Demarco of Shelby, Miss., whom he married in April, 1922.

DR. G. NELSON FURBECK

Dr. George Nelson Furbeck, San Antonio State Hospital psychiatrist, died October 22, 1959.

A native of Albany, N. Y., Dr. Furbeck was born February 19, 1904, the son of George Warren and Abbie L. (Mitchell) Furbeck. His preliminary education was received at Mt. Hermon, Mass., and Altamont, N. Y., schools, with later academic training at New York University. He was graduated with a doctor of medicine degree from the Universidad Nacional de Mexico, D. F., in 1932, interning at the General Hospital of Mexico in Mexico, D. F., and the Charity Hospital of Louisiana at New Orleans. Dr. Furbeck later received postgraduate training at Tulane University of Louisiana at New Orleans and the University of North Carolina at Chapel Hill.

Dr. Furbeck began his work in medicine as a general practitioner in 1933 in Minatitlan, Vera Cruz, Mexico. Changing to internal medicine 2 years later, he returned to Mexico City where he practiced 12 years. In 1951 he went to Jennings, La., (the Jeff Davis-Allen Parish) as public health physician. From there he moved to Tangipahoa Parish in Hammond, La., where he stayed until 1955. That year he received certification in public health from the American Board of Preventive Medicine.

Branching out into psychiatry in July of 1955, he joined the staff of the East Louisiana State Hospital at Jeckson, La., and after a year moved to Bay City, where he became director of the Fort Bend-Matagorda County Health Department. Since August of this year, he had been on the State Hospital staff in San Antonio. Dr. Furbeck served as captain with the Army Medical Corps for 3½ years during which time he was stationed in North Africa and the South Pacific.

Active in medical circles during his years of practice, Dr. Furbeck belonged to the Texas Medical Association through the Wharton-Jackson-Matagorda-Fort Bend Counties Medical Society, the American Medical Association, the American Society of Tropical Medicine, the American Association of Public Health Physicians, and the American Assocaition for the Advancement of Science. He was a fellow of the American Public Health Association and the American College of Preventive Medicine. An elder in the Presbyterian Church, Dr. Furbeck was a member of several Masonic bodies and the American Legion.

In 1933 Dr. Furbeck married the former Miss Irma Cousins of New Orleans. They had two daughters, Phyllis Abbie of San Antonio, and Irma Ann, now Mrs. Wilton A. Lee, of New Orleans, La. All three survive.

DR. WILLIAM M. BRUMBY

Dr. William McDuffie Brumby, Houston, one of the founders of the Texas Tuberculosis Association and first president of the State Board of Health, died November 29, 1959.

The retired physician was born in 1866 in Delhi, La., where he attended common schools. He also attended the University of Alabama and was a graduate of the Tulane University Medical School at New Orleans. After practicing for 7 years with his father in Delhi, he went to Houston in 1896. In 1900 he was appointed city health officer and in 1907, he wrote the state sanitary code. With modifications, this code remains in effect.

Dr. Brumby fought smallpox and yellow fever epidemics in those early days and was credited by many as being the first health officer in the country to carry on tuberculosis testing of dairy herds. His greatest achievement, he stated at one time, was halting the influx of tuberculosis patients to Texas. As state health officer he found that hundreds of persons with tuberculosis were coming to Texas to get the benefit of West Texas climate. Dr. Brumby maintained

that each county should care for its own, and after carrying his fight to the International Congress on Tuberculosis in Washington, D. C., eastern states began building their own hospitals and taking back the tuberculosis patients they had sent to Texas. Dr. Brumby retired from medical practice 4 years ago.

An active participant throughout the years of various medical societies, Dr. Brumby had held membership in the Texas Medical Association since 1904, serving two different terms as chairman of the Sections on State Medicine and Public Hygiene. He was elected to honorary membership in the state organization in 1940. Dr. Brumby also had belonged to the Harris County Medical Society and previously had held membership in the Travis County Society and the McLennan County Society. He was a fellow of the American College of Surgeons and a member of the American Medical Association. He attended the Trinity Episcopal Church in Houston.

Members of the family who survive include his wife, Mrs. Lila Kirby Brumby; three daughters, Mrs. Anna Harris of Los Angeles, Mrs. Courteney White of Denver, and Mrs. Lila Brown of Dallas; a son, B. R. Brumby of Corpus Christi; 12 grandchildren; and two great-grandchildren.

DR. MURDOCK D. FRY

Dr. Murdock D. Fry, Dallas, died December 2, 1959.

Born at Pike on August 13, 1887, Dr. Fry was graduated from Baylor University, Waco, in 1912 and taught physics and chemistry in Sherman and McKinney schools before deciding to become a physician. In 1922 he was graduated from the Baylor University College of Medicine, Dallas, following which he served a year's internship and another year as resident physician and member of the teaching staff at Baylor Hospital. Dr. Fry started his practice in Dallas in 1924, continuing as a general practitioner there until his death. During World War II, he taught Red Cross first aid and gave much of his time to examining draftees for the local draft board. In 1949 he was named Dallas County's Outstanding Family Doctor of the Year.

A member of the Texas Medical Association through the Dallas County Medical Society, Dr. Fry belonged to the American Medical Association. He was a Mason and a member of Hella Temple Shrine, the Lakewood Country Club, Phi Beta Pi medical fraternity, and the East Dallas Christian Church.

Survivors are his wife; a son, Dr. Norman Fry of New Orleans; five sisters, Mrs. A. J. Dimmick of Kingsville, Mrs. B. T. Cheely of Kaufman, Mrs. L. E. Johnson of San Antonio, Mrs. George Gilmore of Leonard, and Mrs. Hazel Chapman of Farmersville; five brothers, C. L. Fry and Hershel Fry of Leonard, Grady L. Fry of Paris, Cecil Fry of Phoenix, and Lewis Fry of McKinney; and two grandchildren.

DR. MURDOCK D. FRY

DR. B. C. WALLACE, JR.

Dr. Benjamin Cicero Wallace, Jr., Waxahachie internist, died in a Dallas hospital December 7, 1959, of heart disease.

A native of Coolidge, Dr. Wallace was born August 31, 1909, the son of Benjamin Cicero, Sr., and Mae (McCoy) Wallace. After attending schools in Coolidge, Dr. Wallace went to Simmons University at Abilene for a year and to the University of Texas at Austin for another year. He completed his academic work and received his degree in medicine from Tulane University at New Orleans. Following his graduation in 1935 he was an intern, a resident, and a fellow in medicine at Scott and White Hospital at Temple. In 1942 he joined the Air Corps, serving with the

DR. B. C. WALLACE, JR.

rank of captain. Upon his discharge in 1946, he went to Waxahachie, where he opened a private practice for the first time. His work in Waxahachie continued until his death.

A past president and secretary of the Ellis County Medical Society, Dr. Wallace also belonged to the Texas Medical Association, Texas Heart Association, Texas Diabetes Association, of which he was vice-president, American Medical Association, American Heart Association, American College of Chest Physicians, American Diabetes Association, and Fort Worth Internists Club. He also was an associate of the American College of Physicians, a fellow of the Acad-

emy International of Medicine, and formerly had been vice-president of the Texas Heart Association, president of the Scott and White Alumni Association, and medical adviser for the Ellis County Heart Association. Dr. Wallace belonged to the Central Presbyterian Church, the Lions Club, and Theta Kappa Psi fraternity. His leisure hours were taken up with hunting, fishing, golf, and woodwork.

In 1936 Dr. Wallace and the former Miss Ora Belle Barker of Waxahachie were married. She survives as do two daughters, Mollie Sue and Karen Jane, both of Waxahachie; a sister, Mrs. Ruth Tull of Coolidge; and a brother, Roy B. Wallace of Palestine.

DR. L. W. POLLOK

Dr. Lewis William Pollok, Temple surgeon, died November 21, 1959.

Born February 11, 1880, at Danville, Va., Dr. Pollok attended Danville public schools and was an honor graduate of the Danville, Va., Military Institute. A graduate also of the University of Virginia School of Medicine at Charlottesville in 1902, he interned at the New York City Hospital. Throughout his medical career he attended numerous postgraduate courses. He also was the author of many scientific articles on a variety of subjects. Dr. Pollok practiced at Temple from 1905 until 1948, when he retired because of illness. He was a partner and member of the staff of King's Daughters Hospital. During World War I, Dr. Pollok was chairman and physician for the Temple Draft Board. He also was health officer for Temple for a brief period.

A member of the Bell County Medical Society and the Texas Medical Association since 1906, Dr. Pollok was elected to honorary membership in the latter organization in 1952 and was chairman of the group's Section on Surgery in 1944. He belonged to the American Medical Association and was a fellow of the American College of Surgeons. He was a Presbyterian and enjoyed golf.

Dr. Pollok and the former Miss Katheryn Geisel were married in December, 1909, in New York. She died in October, 1958.

Members of the family who survive include one son, Lewis W. Pollok, Jr., of Houston; one daughter, Mrs. Alfred Moorhouse of Center Sandwich, N. H.; four grandchildren, Lewis Alfred Moorhouse of Center Sandwich, N. H., and Clemence, Nancy and Lewis William Pollok, III, all of Houston; two brothers, Frank Pollok of Lynchburg, Va., and Edgar Pollok of Danville, Va.; and one sister, Mrs. L. D. Sellers of Burkville, Va.

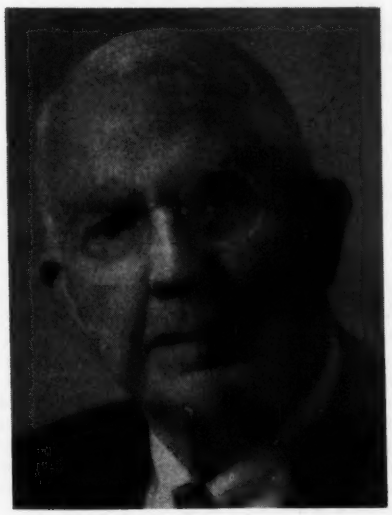
DR. J. G. McCALL

Dr. John Gordon McCall, Brady, died November 22, 1959.

Dr. McCall was born February 12, 1876, at Grand Chenir, La., the son of J. M. and Harriett (Gordon) McCall. He attended public schools in Cameron Parish, La., and was a 1901 graduate of Tulane University Medical School at New Orleans. He did postgraduate work in New Orleans, Galveston, Chicago, and New York. After his graduation, Dr. McCall practiced at Brady, first alone, then in partnership with Dr. J. S. Anderson. For more than 50 years Dr. McCall was county health officer of McCulloch County, retiring from this post in 1952. He also was local surgeon for the Fort Worth and Rio Grande and the Santa Fe and Frisco Railroads. A veteran of World War I, Dr. McCall was a captain with the Army Medical Corps. Aside from his practice of medicine, he had ranching interests and had been director and vice-president of the Commercial National Bank of Brady for over 25 years.

A member of the Texas Medical Association since 1906, Dr. McCall was elected to honorary membership in this group in 1954. He also was a member of the Kimble-Mason-Menard-McCulloch Counties Medical Society, the District 4 Medical Society, and the American Medical Association. He was a Mason and Shriner, served as an elder, deacon, and trustee of the Presbyterian Church, and was a member of the Rotary Club.

Dr. McCall married the former Miss Edna Sheridan in December, 1902. She survives as do a daughter, Mrs. Harry L. Curtis of Brady; a brother, Joe J. McCall of Brady; and two grandchildren, Mrs. John A. Ward, III of Dallas and Harry Lamar Curtis, Jr., a student at Harvard University, Cambridge, Mass.



DR. L. W. POLLOK

DR. J. G. McCALL